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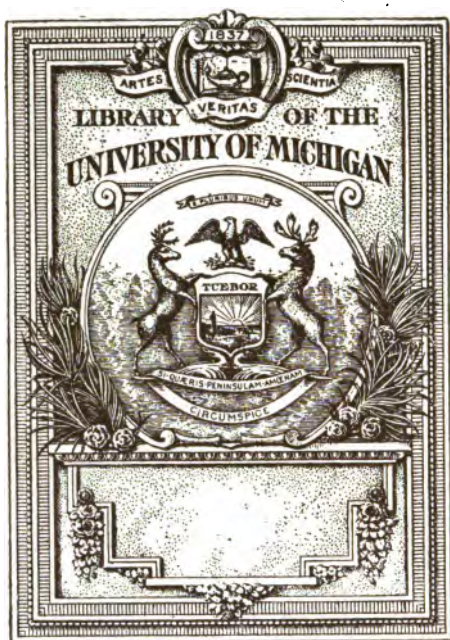
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THE GIFT OF  
*Prof. H. H. Bartlett*

AC  
5  
R22

*Handwritten text, possibly "The end of the world"*





# Singalesisk Skriftlære

af

*Prof. B. BASK.*

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KOLOMBO 1821.

I en Opsats, fra 1828 yttér Forfatteren følgende med Hensyn til dette Hrudstykke:

"I lang Tid har jeg forehaft et literært Arbejde over den fra Sanskrit radikalt forskjellige Sprogklasse i det sydlige Ostindien eller det såkaldte Dekhan, hvortil, blandt andre betydeligen udstrakte og mærkværdige Sprog, hører Tamulisk, som tales i det danske Distrikt. Min Hensigt er deri at give paa kort Udsigt over alle de til denne Klasse hørende Sprog, deres Indretning, indbyrdes Slægtskab og Forhold til andre bekjendte asiatiske Tungemål, en i Videnskabernes udbredte Rige ikke uvigtig Mark, der hidtil har været så ubekjendt i den lærde Verden, at endnu Klaproth, i sin for et Par År siden udgivne *Asia polyglotta*, ikke med et eneste Ord har omtalt den hele Sprogklasse. I Kolombo fik jeg Begyndelsen af dette Arbejde med stor Møjsommelighed trykt paa Dansk, for at erholde de asiatiske Tegn af ét af de fuldstændigste af disse Sprog (Singalesisk) parallelliserede med de latinske Bogstaver og Mærker, hvormed jeg mente at udtrykke dem alle. Men efter min Tilbagekomst til Fædrelandet har det været mig umuligt, at få det fortsat, da der ikke lettelig erholdes Forlægger til et Værk, som ikke blot ingen Vinding lover, men endog kræver betydelige Udgifter, og da jeg i min såre indskrænkede Stilling ikke ser mig i Stand til at opofre noget til videnskabelige Foretagender. Der udfordres nemlig at adskillige ny Bogstaver eller rettere blotte Indretninger ved de latinske Bogstaver skæres og støbes, hvilke, skønt kun få til hvert Sprog, dog til alle 6 af denne Klasse løbe op til en betydelig Sum her i Byen, hvor der ikke ere mange, som kunne skære og kun en eneste som kan støbe dem. Desuden udfordres nogle Kobbertavler, og da der ikke er at tænke paa Forlægger, så falder endelig hele Udgiften for Papiir og Trykningen (som er vanskelig nok) tillige på Udgiveren."

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# A. DEN SINGALESISKE

## SKRIFTLÆRE.

### I. Lydtegnene.

1. *Bogstaverne* tilligemed deres *Tegn* ere i den sædvanlige Indiske Orden følgende.

#### A. Selvlyde.

Bogstaver	Tegn	Betydning	Bogstaver	Tegn	Betydning
අ	(fattes)	a, ä ( <i>kort</i> )	ඊ	ඊ	e
ආ	ආ	á ( <i>langt</i> )	ඈ	ඈ	é
ඇ	ඇ	i	ඉ	ඉ	ei
ඈ	ඈ	í	ඊ	ඊ	o
ඉ	ඉ	u	උ	උ	ó
ඊ	ඊ	ú	ඌ	ඌ	ou
උ	උ	e ( <i>irí</i> )	ඍ	ඍ	æ ( <i>aubent</i> )
ඌ	ඌ	é ( <i>irí</i> )	ඎ	ඎ	ó
ඍ	ඍ	ø ( <i>ulū</i> )	ඏ	(fattes)	am ( <i>Næselýd</i> )
ඎ	ඎ	ó ( <i>ulū</i> )	ඐ	—	ah ( <i>Aundlýd</i> )

#### B. Medlyde.

(fattes)	ka	උ	—	dha
—	kha	ඌ	—	na
—	ga	ඍ	—	pa
—	gha	ඎ	—	pha
—	ga ( <i>nga</i> )	ඏ	—	bi
—	ca ( <i>tsha</i> )	ඐ	—	bha
—	cha ( <i>tshha</i> )	එ	—	ma
—	ja ( <i>dsha</i> )	ඒ	—	ya
—	jha ( <i>dshha</i> )	උ	ආ	ra
—	ña ( <i>nya</i> )	ඌ	ඈ	la
—	pa ( <i>haardt t</i> )	ඍ	—	wa, va
—	pha	ඎ	—	ca
—	ða ( <i>haardt d</i> )	ඏ	—	sa ( <i>sha</i> )
—	ðha	ඐ	—	sa
—	na ( <i>haardt n</i> )	එ	—	ha ( <i>haardt h</i> )
—	ta	ඒ	—	ta ( <i>haardt t</i> )
—	tha	උ	—	ta ( <i>ksha</i> ).
—	da	ඌ	—	

2. Den singalesiske Bogstavække හේතිය, hōḥiā, stemmer overens med den sanskritiske, *Devā-nāgarī* kaldet, og anvendes derfor af Singaleserne ogsaa til at skrive Sanskrit med. Den er ikke allene ligesaa fuldstændig, men indeholder desuden nogle særegne Bogstaver; ialt 54 eller 55, ordnede i en regelret og sindrig Følge. I Pāli forekommer blot 41 af disse, og intet ejendommeligt, altsaa blot en Del, eller ligesom et Brudstykke af den sansk. og sing. Skriftordning (eller Skriftsystem). Det syntes derfor naturligt at begynde med en Fremsettelse af denne, samt af Maaden at iføre den evropæisk Dragt, hvilken da tillige gjelder for Sanskrit, Pāli og alle andre asiatiske Tungemaal, hvor Braminernes Skriftordning har været indført.

3. Læsningen foregaar fra venstre til højre, ligesom i Sanskrit, Tamulisk, Barmansk o. s. v. men er her lettere, da Ordene, hvorvel de ikke adskilles, dog heller ikke sammenflettes, saa at Begyndelsesbogstavet af det ene Ord sammendrages med Slutningsbogstavet af det foregaaende, som sædvanligt i Sanskrit og Tamul. Den singal. Skrift har ogsaa et regelrette og skønnere Udseende end Deva-nagari, Telugisk o. s. v. da den i intet Tilfælde anbringer Bogstaver over eller under hverandre; men blot sætter de uden mellemkommende Selvlyd sammenstående Medlydes Figurer ved Siden af hverandre i en sammenhæftet Form uden mellemkommende Rum. Ikke desmindre gives dog her ligesom i Deva-nagari *Tegn* isteden for Selvlydene og nogle faa Medlyde, og disse Tegn anbringes dels over dels under Linien dels paa andre besynderlige Maader, hvorom snart mere.

4. Bogstaverne අකුරු akurū, eller අකුරුය, akurūyā, benævnes ved at føje යනා, yannā, eller යනු, yānu, til det blotte Bogstav, som det findes i Rækken; f. E. අයනා, A-yannā, kort *a*; ආයනා, ā-yannā, langt *ā*; කයනා, ka-yannā, *Kaa*; කහයනා, kha-yannā, *Kaa-haa*; සයනා, sa-yannā, *Es*, o. s. v.

Herfra undtages අම (·), der sædvanligvis faar Navn af බිඳු බි, binduwā, og අහ (s), der kaldes බිඳු දෙක, bindu-dekā, *dobbelt Bindu*. Selvlyden අ sættes foran i Bogstavrækken, blot for at gjøre det muligt at udtale dem.

Af Medlydene adskilles desuden de aandeløse fra de beundede ved Tillægsordene අප, alpā, og මාප්‍රාණ, mā-prāṇā; saasom අප්‍රාණය, alpā pa-yannā, *aandeløst Pe*; මාප්‍රාණයනා, mā-prāṇā pa-yannā, *beundet Pe* eller *Pe-haa*. Esserne adskilles ogsaa ved egne Tillæg: ආ faar Navn af කඬයනා, kaḍḍa sa-yannā; ග af ගුලයනා, i-sa-yannā; ග් af ගුලයනා, golu sa-yannā; ල kaldes sædvanlig සාඤ්ඤාකලයනා, saññākā-la-yannā, fordi den øverste indbøjede Del af Figuren har Lighed med et Tegn kaldet Saññaka. Ordet kaḍḍa betyder *brudt*; golu, *stunt*.

Et Tegn, der, som Forkortelse isteden for et vist Bogstave

hele Figur. hæftes til et andet Bogstav, naar de komme i umiddelbar Forbindelse (3.), faar Navn af *අකුරු අවයව*, akuru-awā-yawā, d. e. *Bogstav-lem*.

Da Tegnene betragtes som *Lemmer* (Dele) af Bogstaverne, og alle Selvlydene, naar de ikke begynde en Stavelse, udtrykkes ved Tegn; saa blive Medlydene med tilhørende Selvlyde, hvad vi kalde Stavelser, her betragtede og benævnedes som Bogstaver; f. E. *ඌ*, tra, kaldes *ත්‍රායනා*, tra-yannā; og ligesom vi tælle Stavelserne i et Vers, saa beregne Singaleserne hvormange Bogstaver det indeholder.

5. Angaaende de latinske Bogstaver vilde det vel være raadeligt at kalde *ඈ*, *Aḡga* (d. e. *Anga*); *c*, *Ce*, med den italienske Udtale; *j*, *Je*; *ñ*, *Enñe*; og *ç*, *Ce*, med den franske og danske Lyd (d. e. *Se*); *p*, *To*, med den haarde armeniske og arabiske Lyd; *ð*, *Do*; og *n*, *No*; samt *ś*, *Sho*, eller efter tysk Retskrivning *Scho*; og *l*, *Lo*; men beholde de indiske Navne paa de øvrige: *ṛ*, *Ro* (*Rho*) forekommer i Tamul, Telugu og Hindost.

6. De egentlige Selvlydsbogstaver anvendes blot i Begyndelsen af Ordene og efter andre Selvlyde: saasnart de skulde følge efter nogen af Medlydene, erstattes de ved de behørigte Tegn, hæftede til Medlydsbogstaverne; f. E. *itā*, *højst*, skrives *ඉතා*, ikke *ඉතාතා*.

7. *අ* kort *a* eller *ä* har intet Tegn, men indbefattes i, eller underforstaaes efter alle Medlydsbogstaver, hvor intet andet Selvlydstegn er anbragt; f. E. *malā*, *Blomst*, skrives blot *මල*; *sawāsā*, *Aften*, *සවස*.

Herfra undtages dog *· m* og *· h*, der intet *a* indbefatte, men slutte Stavelsen; f. E. *සිංහල*, *siṃhalā*, *singalesisk*; *දුකුහ්‍යා*, *dukkhāyā*, *Smerte*. Det er vel paa Grund af denne Særegenhed at disse tvende Bogstaver af de indiske Sproglærde regnes blandt Selvlydene.

8. Derimod haves et eget Tegn (*ඈ*) *Al*, kaldet, der anbringes oven paa Medlydsbogstaverne i Enden af Ord og Stavelser, for at ophæve det ellers i dem indbefattede *a*; f. E. *මල*, *galā*, *Sten*, men *මල*, *gal*, *Stene*; *කරකරා*, *kāranāwā*, *gjör*, men *කරකරා*, *kāranpā*, *at gjøre*. Ved de Bogstaver, hvis Figurer oven til endes i en Bue, sammendrages *Al* med denne Bue i Skrivningen, saaledes *ඔ p*, *ඔ m*, *ඔ w*, o. desl.

I Begyndelsen af Ordene anvendes dette *Al* dog aldrig, og i Midten ikke gjerne til at udmærke de selvlydsløse Medlyde; men disse sammendrages med de næstfølgende uden noget mellemkommende Rum (3.); f. E. *swapnāyā*, *Dröm*, skrives *සවනාය*, ikke *සවනාය*; eller og et Tegn isteden for det ene Medlydsbogstav hæftes til det andet; saasom *ආරාධනා*, *crāwānāyā*, *Høren*; *වතුකත*, *wākūyāyā*, *Ord*. Begge Dele kunne naturligvis anvendes tillige, hvor tre Medlyde stode sammen; f. E. *ස්ත්‍රී*, *stri*, *Kvinde*.

Naar man vil benævne en af Medlydene, blottet for det ellers

indbefattede *a*, følger man *Al* til Navnet; saa at f. E. *Al-pa-yannā* svarer til vort *Pe (p)*, men *Pa-yannā* til Stavelsen *pa*. *o m*, *Em* faar Navn af *Al-dum ma-yannā*, eller *Al-ma yannā*.

9. Tegnet (၁) 4, *မုလပိလ္လ*, *æläpillä*, sættes ved Siden af Bogstaverne; undtagen *ဆာ* *ña*, og *င* *da*, hvor det føjes til Foden; f. E. *မုလပိလ္လ*, *ájāwā*, *Ordre*; *င* *danāyā*, *Almisse*. Efter *ဆာ* *ña*, udtrykkes det ved endnu en Tand eller Hage oven til i den sidste Halvdel af Figuren.

10. Bogstavet *၀* *i*, skrives stundum ligesom kort *i* med tilføjet *Al*, der i slige Tilfælde faar Navn af *မုလပိလ္လ*, *ædlinā*, *Længdetegn*. Begge I-tegnene (၀) *i*, og (၀) *i*, *မုလပိလ္လ*, *ispillä*, og *မုလပိလ္လ*, *ispillä-gæpê*, sættes over Bogstaverne; f. E. *မုလပိလ္လ*, *kikilī*, *Høne*, men sammendrages ligesom *Al* med de Bogstaver, der oven til endes i en Bue, saaledes *ဝိ* *pi*, *ပိ* *pi*, *ဝိ* *si*, *ပိ* *si*, *ဝိ* *dhi*, *ပိ* *dhi*, *မ* *mi*, *မ* *mi*, *ဝ* *wi*, *ဝ* *wi*, o desl. Forskjellen er at *Al* danner skarpe Hjørner, I-tegnene derimod en lidt Runding, hvor de støde sammen med Bogstavtrækkene. I *မိမိ* *simbiw*, *kysser I!* har man Exempel paa begge Dele — Ordet *Gæpê* betyder *Knude*, og sigter til det ūje, som vi vilde kalde det, der udmærker det lange Tegn fra det korte.

11. Bogstavet (၁) *u*, *u*, adskilles fra kort *u* (၁) *u*, ved at tilføje Tegnet (၁) *မုလပိလ္လ*, *gayānu-kittā* eller *မုလပိလ္လ*, *gayānu-kittā*, *gāyānu-kittā*, saa kaldet formedelst dets Lighed med *မ*. U-tegnene (၁) *u*, og (၁) *u*, *မုလပိလ္လ*, *pāpillä*, og *မုလပိလ္လ*, *pāpillä*, *pekāniyā* (d. e. *Papilla-narlen*) hæftes til Foden af Bogstaverne; f. E. *မုလပိလ္လ*, *kapupuwā*, *Krage*; *မုလပိလ္လ*, *dūtāyā*, *Sendebud*; men ved *ဆာ*, *မ*, *ဆာ*, *မ*, *မ*, *မ*, *မ*, *မ*, *မ* og *မ* samt efter Ra-tegnet (၁) antage de en ganske anden Figur, vendt til højre Side, saaledes (၁) *မ*; f. E. *မုလပိလ္လ*, *kukulā*, (*en*) *Hane*; *မုလပိလ္လ*, *bhūmiyā*, *Jorden*; *မုလပိလ္လ*, *awuruddā*, (*et*) *Aur*, *မုလပိလ္လ*, *rūpāyā*, *Figur*; *မုလပိလ္လ*, *siyāfu*, *alle*; langt *fū* skrives *မု*.

12. Tegnene *၁* *æ*, og *၁* *æ*, *မုလပိလ္လ*, *æläpillä-gæpê*, og *မုလပိလ္လ*, *æläpillä-gæpê-dekā*, samt *၁* *o*, og *၁* *o*, *မုလပိလ္လ*, *gayānu-kittā*, og *မုလပိလ္လ*, *gayānu-kittā-dekā*, saa kaldte formedelst deres Lighed med *၁*, og *၁*, anbringes i Linien efter det behørig Medlydsbogstav; f. E. *ဆာ* *æ*, *ဆာ* *æ*, *ဆာ* *o*, *ဆာ* *o*; men de tilhøre Sanskrit, og forekomme yderst sjældent i Sing. Endog i de af Sanskrit optagne Ord erstattes de sædvanlig ved andre Lydtegn; f. E. *ဆာ* *æ*, der er det hyppigste, ved Ra-tegnet (၁), saasom *မုလပိလ္လ*, *wrāxāyā*, (*et*) *Tæ*, san. *မုလပိလ္လ*, *waxah*; *မုလပိလ္လ*, *hrādāyā*, *Hjærte*, san. *မုလပိလ္လ*, *hrādāyam*. Den almindelige sing. Udtale er dog næsten *wāxāyā*, *hārdāyā*, ligesom man i Græken finder baade *καρδια* og *καρδια*.

13. E-tegnet *၁* *e*, *မုလပိလ္လ*, *kombuwā*, anbringes vel og i Linien, men urimelig nok foran det Bogstav, som det i Udtalen

følger efter; f. E. දෙනවා, denāwā, giver. Navnet *Kombuwā* forskriver sig fra et tamulisk Ord, som betyder *Horn*. O-tegnet ඌ består af samme Konibu foran, samt desuden *Æla*-pilla efter Bogstavet, saaledes ඌ, no, ikke; දරා, (*en*) *Dōr*. Bogstaverne ඒ é, og ඔ ó, udmærkes fra kort *e* og *o* ved tilføjtet *Al* (*Ædínā*): og deres Tegn skilles fra kort *E*-tegn og *O*-tegn ved samme Middel; dog saa at *Al* ikke anbringes paa *Kombu*, men paa det næste, i Udtalen forangaaende, Bogstav, for at udtrykke langt *é*; saasom මාගේ, mágé, *mit, min*; මේ, *dette, denne*; og paa det efter Medlydsbogstavet følgende *Ælapilla*, for at udtrykke langt *ó*; saasom සොකාවු, só-kāwú, *bedrøvet*; දොනවා, donāwā, *malke*. Men i Sanskrit og *Pali* ere Selvlydene *e* og *o* altid lange, saa at den her beskrevne Anvendelse af *Al* tilhører Singalesisk alene.

14. Tegnet ei, kombu-dek, *dobbelt Kombu*, anbringes foran, ligesom det enkelte; f. E. weirä, *Fjendskab, Forbitrelse*. Tegnet for *ou* bestaar af Kombu foran og Gayanukiitta efter Medlydsbogstavet; f. E. gouräwä, *Ære*.

15. Æ-tegnene *kæ*, og *kæ*, *kæ* og *dæ*-tegnene, *kopä* og *digä* intrañðe, eller *gylt* og *glä* æläyañðe, ere dannede aldeles ligesom de sid-tanførte U-tegn (*ll.*); men skilles fra dem ved Stillingen, da de föjes til Toppen, men U-tegnene hæfies til Foden af Bogstaverne, saaledes: *kæ kæ, kæ kæ, gæ gæ, dæ dæ, næ næ, æ æ, æ æ, o. s. v.* *ku ku, kü kü, gu gu, gü gü, nu nu, nū nū, tu tu;* f. E. *ölö, rplä, Balge; ö, rä, Nat.* Ved *ç* föjes dog Æ-tegnene, ligesom *ç*, til Foden, saaledes *çæ, çæn, nu;* men dette er ikke udsat for nogen Forveksling med Stavelsen *çæ*, dun, hvor det andet sædvanlige U-tegn anvendes.—*Kopä* betyder *kort*; *digä*, *langt*.

16. Aa (s) anbringes i Haandskrifter stundum inden i et kort I-tegn over Linien, stundum inden i et kort U-tegn. under samme, hvilket læses ligefrem *im*, *um*; men i Trykning sættes det ligesom Aa (s) med Rette altid paa sin behørlige Plads i Linien (7.).

17. Tegnet  $\text{ᳵ}$ , som faar Navn af  $\text{ᳵ}$  ( $\text{ᳵ}$ ), sa skårå, eller, som man efter dets Oprindelse og efter telugisk Sprogbrug kunde kalde det, *Hulv am*, tilkjendegiver en svagere Nærslyd end *Am*, og er naa-kje nærmere Lyden af det franske Slutnings-*En* I den platte sing. Udtale lyder det næsten  $\text{ᳵ}$  aggi. Det kan betegnes ved  $\text{ᳵ}$  ligesom i Port, eller bedre ved en nedvendt Apostrof, hæftet til Foden af Salvlydshogstavet ligesom i Polsk, saaledes *a*, *á*, *i*, *í*, *u*, *ó* s. v.; men det tilhører de sanskr. Ord, og forekommer saa yderst sjælden i Sing. at det her kan være os næsten ligegyldigt.

18. I gammel Sanskrit findes endnu et Tegn (?) *Hal'ah*,





Bogstav undergaaet saamegen Forandring, at de uden særskilt Forklaring vilde være aldeles ulæselige. De vigtigste ere: **ᳵ** cca, for **᳚**, faar Navn af Pāli-ca-yannā, *Pali dobbelt Ce*, fordi det især forekommer i Pali Haandskrifter, hvor **ᳵ** ᳶa, sjælden eller aldrig staar allene. **ᳶ** jña, lyder i den platte sing. Udtale næsten iḡṇa eller iḡṇā; men de sanskritske Ord, hvori det forekommer, vise tydelig nok, at det er sammentrukken af **ᳶ** og **ᳶ**: f. E. **ᳶ** prajñāwā, *Visdom*. **ᳶ** ppha, **ᳶ** ddha, **ᳶ** dwa. **ᳶ** bha, kaldes sædvanlig Sabbā-ba-yannā, *Pali dobbelt Ba*; formodentlig af det pal. Ord **ᳶ** sabbam, *alt*, hvori det hyppig forekommer. **ᳶ** mba, faar Navn af Ambā-ba-vannā.

22. De beaandede Bogstaver kh, gh, ch o. s. v. fordobles ikke, men i slige Tilfælde bliver det første aandeløst, ligesom i Græsk. Dog findes disse 10 Bogstaver hverken i ny Singalesisk eller i den gamle Elu, undtagen i Ord, der ere optagne fra Sanskrit, og selv i disse vil man baae i Udtale og Skrivning idelig finde dem forblandede med de aandeløse; f. E. **ᳶ** dhūli. *Støv*; o. m. fl. Dette har givet Anledning til mangfoldige Fejltagelser i Bogstaveringen af Navne, endog i evrop. Bøger; f. E. Kapt. Mahony i 7de. Bd. af Asiat. Res. skriver *Bhooddha*, *Soodlodench* for Buddhah, Suddhodanah, som er den rette sanskritske Form af disse Navne.

23. Ya-tegnet (**ᳶ**), **ᳶ** yañcē kaldet, bruges naar *y* fordobles, eller følger efter andre Medlyde; det faar sin Plads i Linien, saaledes **ᳶ** manuṣyāyā, *Menneske*. I Haandskrifter hæftes det til Foden af **ᳶ**.

24. Ar-tegnet (**ᳶ**), **ᳶ** réphē eller rébē kaldet, bruges i Midten af Ordene, naar *r* gaar foran en anden Medlyd, oven paa hvis Figur det anbringes; hvorpaa denne, hvis den ikke er sammensat, i Følge Brugen i Sanskrit uden Forskjel kan fordobles eller forblive enkelt; saasom **ᳶ** warnānāwā, eller **ᳶ** warnānāwā, *Lorpsning*. Istedes for Sammenstødene **ᳶ** ryya, og **ᳶ** rwwa, horer man i daglig Tale rgya, rgwa; f. E. **ᳶ** bhāryāwā, *Hustru*; **ᳶ** parwātāyā, *Klippe*, *Fjæld*; paa Grund hvoraf det synes rettest i disse tvende Tilfælde at fordoble den næstfølgende Medlyd yy, ww, ikke ellers. Dette har ellers ogsaa ofte givet Anledning til en urimelig Bogstavering i engelske Bøger; f. E. Kapt. Mahony skriver *Nirgowanē* og *Nirgoowanē* for **ᳶ** nirwānē, *Ulgemliggjøreelse*, *den buddhistiske Salighed*; og Joinville i samme Bind af As. Res. anmærker: "The end of the soul is called in Singalese, *Nivani*, and, I am told, in Sanscrit, *Nirgwani*" Ordet heder i Sanskrit nirwānam, i *Pali* nibbānam, og i *Singal.* som sagt, nirwānē eller nirwānāyā, med den ligegyldige Form paa *āyā* eller *ē*, som træder isteden

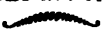
for de sanskr. Endelser *am* og *ah* i Navne paa livløse Ting, hvorpaa vi allerede have set mange Exempler.

25. Ra-tegnet (,) මාත්‍රාඥ, *mātraññe*, anvendes ligesom Ya-tegnet, naar *r* følger efter en anden Medlyd, til Foden af hvis Figur det hæftes, saaledes *akra*, *gri*, *drā* o. desl.

26. Angaaende den sing. Skrivebrug kan man endnu mærke sig, at et udeglemt Bogstav anbringes neden under, ikke som hos os over Linien; et fejlskrevet mærkes med to smaa Stræger, næsten ligesom Aksenter, helst i den øvre Kant, eller, om Skriveren har mærket det tidlig nok, lades ufuldendt. Flere fejlskrevne Ord i Rad indsluttes i Klammer.

27. Man indser nu hvormange overflødige Figurer den sing. Bogstavskrift er overlæstet med, skönt maaskje den simpleste af alle, der udtrykke den braminske Skriftordning fuldstændig. Bogstavrækken indeholder 54 Bogstaver og 20 Tegn, foruden de dobbelte U-tegn (11.) samt Sa'skare og Saññaka, og endelig en halv Snes Sammentrækninger, der maa kjendes særskilt, i alt 88. Drager man end her fra *oa*, *o*, *ou*, *oe* (ó, é, ó, ou) og de sammensatte Tegn *oe*, *oe*, *oe*, *oe* (é, o, ó, ou), der intet nyt indeholde; saa bliver dog tilbage 80 forskjellige Figurer, hvorimod den europæiske Betegnelse blot udkræver 8 Selvlyde: a, i, u, e, o, æ, og 20 Medlyde: k, g, c, j, p, s, t, d, p, b, y, w, r, l, n, m, s, x, h; i alt 28 Grundbogstaver med nogle faa regelret anvendte og yderst simple Adskillelsemærker.

## 2. Skilletegn og Talfigurer.

28. At de indiske Folkefærd skulde have egne Tegn for at adskille Leddene af Talen, kunde saa meget mindre formodes, som de ikke en Gang adskille Ordene; man vil ikke heller finde noget saadant Mærke i sing. Bøger undtagen  කුසල, *kunḍaliyā*, *Versetegnet*, som vi kunne kalde det. Det tjener især til at adskille Vers fra ubunden Stil, og de forskjellige Sangvers fra hverandre: stundum anvendes det dog og omtrent hvor vi vilde sætte en Punkt, eller begynde en ny Linie.

29. Regnemaaden i Singalesisk stemmer vel overens med den sanskritske og europæiske hvad Sproget angaar; men Betegnelsen med Talfigurer මලකම, *ilakkamā*, afviger, og er indrettet ligesom i Malayāta eller Malayātma (Sproget paa den malebariske Kyst), overensstemmende med den gamle græske og slaviske Betegnelse med Bogstaver. Det er at sige, Singaleserne fattes Nul, men have derimod, foruden de 9 Tegn for Enerne, 9 andre for Tierne, ja, som der siges, 9 andre for Hundrederne, og atter 9 for Tusenderne, med hvilke 36 Taltegn de bekvemt skulde kunne udtrykke alle Tal indtil 9999; men faa endog af de lærdeste Indfødte kjende dem alle, da de

nu næsten almindelig have givet Plads for de europæiske. De fremstilles her forsaavidt de findes i det fuldstændigste singal. Bogtrykkeri, tilhørende den Wesleyanske Mission i Kolombo, hvor disse Blade ere trykte 1822. Man finder her de 9 Enere og 9 Tiere, samt et Tegn for Hundrede og et for Tusende, i alt følgende 20 Figurer.

၁, ၂, ၃, ၄, ၅, ၆, ၇, ၈, ၉, ၁၀

1, 2, 3, 4, 5, 6, 7, 8, 9, 10,

၁၀, ၂၀, ၃၀, ၄၀, ၅၀, ၆၀, ၇၀, ၈၀, ၉၀, ၁၀၀, ၁၀၀၀.

20, 30, 40, 50, 60, 70, 80, 90, 100, 1000.

De mindre Tal sættes efter de større; f. E. ၁၁ 11, ၁၂ 12, ၁၃ 13, o. s. v. Hundrederne og Tusenderne udtrykkes i Mangel af egne Figurer, ved at sætte de behørigte Enere foran; saasom: ၂၀၀ 200, ၉၀၀ 900, o. desl. 1822 skrives i den sejlonske Tidende, der udkommer ugentlig i Kolombo, saaledes: ၁၈၂၂ 1822.

30. En anden Maade, hvorpaa man sædvanlig numererer Bladene i Bøger, er at forbinde alle Medlydene i den sanskritske Orden med de 16 Selvlyde, saa at man bliver ၁, ၂, ၃, ၄, ၅, ၆, ၇, ၈, ၉, ၁၀, ၁၁, ၁၂, ၁၃, ၁၄, ၁၅, ၁၆; ၁၇, ၁၈, ၁၉, ၂၀ o. s. v. ၁ svarer til 80, ၂ til 400, ၃ til 528. Man gaar herfra over til ၄, som altsaa udtrykker 529, ၅ 530, ၆ 533, ၇ 534, o. s. v. indtil ၉ 544, der slutter Rækken. Man begynder nu forfra igjen med det foransatte Mærke (၈) ၈၈၈၈၈၈, lit-na-yannä, Almanak. En kaldet; saaledes ၈ ၈ 545, ၈ ၈ 546, o. s. v. ၈ regnes nemlig ikke for et eget Bogstav i Singalesisk.

31. En tredie kunstig Talbetegnelse anvendes fornemmelig af Digterne, til at betegne Aarstallet med et læseligt Ord, der passer i Versemaålet, men ellers sjælden har nogen anden Mening. Man vælger her efter Behag et af Bogstaverne:

၄ og de øvrige Selvlyd. for	၀	၁, ၂, ၃, ၄	for	5
၈, ၉, ၁, ၂	for	၁, ၂, ၃	—	6
၆, ၇, ၈, ၉	—	၄, ၅, ၆	—	7
၈, ၉, ၁, ၂	—	၇, ၈, ၉	—	8
၈, ၉, ၁, ၂	—	၈, ၉, ၁	—	9

၈, ၉, ၁ og alle Selvlydtegnene, samt de første selvlydsløse eller lukte Medlyde i Sammenstød, og de med A1 betegnede lukte Medlyde i Enden af Ordene, bruges til at udfylde med, uden Indflydelse paa Talbetydningen. Men herved maa endnu vel mærkes, at, skönt Ordet læses ligesfrem fra venstre til højre, Talberegningen altid foregaar i modsat Orden fra højre til venstre; saa at f. E.

၈၈၈၈၈၈၈၈ læses namo Buddhāya!  
og betyder 5. 3. 9. 1. d. e. r 1,935.

	පොත්පොත්	læses	gotrasatyam,
betyder	3. 2. 7. 1.	det er	1,723.
	කරොද්‍යාසිංහ	læses	kharodhyasīṅṅe,
betyder	2. 2. 8. 1.	det er	1,822.
	අංක	læses	anka,
betyder	0. 1.	det er	10.

Denne Talbetegnelse faar Navn efter den dertil hørende Bogstavorden කපාපයාදි, kapapaya-diya.

### 3. Bogstavernes Inddeling.

32. De i Bogstavrækken (1.) forstanførte 20 Bogstaver regnes for *Selvlyde* පනහර, pan-akura, eller ප්‍රාණාරායා, prāṇāṛāyā; de øvrige 35 for *Medlyde* ගතහර, gat-akura, eller ගාත්‍රාරායා, gātrāṛāyā. De i Klammer inosluttede findes ikke i San. og ansees derfor neppe som særegne Bogstaver; saa at Selvlydene blot regnes for 16, og Medlydene for 34, ialt 50.

33. Selvlydene deles i හ්‍රස්ව, hraswā,  *korte*, og දීර්ඝ, dīrghā,  *lange*; Medlydene i වයිද්‍යා, wargā-akuru,  *Klasse-bogstaver*  eller  *inddelte Bogstaver* , hvortil høre de første 25, og අවය්, awargā,  *uinddelte* , de øvrige 9. Klassebogstavene fordeles i 5  *Klasser* , වයි, wargyā, hver paa 5 Bogstaver, af hvilke det første og tredje er  *uanndelst* , අල්ප, alpā, det andet og fjerde  *beandst* , මාප්‍රාණ, māprāṇā (4), det femte et  *Nærebogstav* , නාඛික, nā-ikā. Disse 5  *Klasser*  benævnes efter det første Bogstav af hver især, saaledes:

#### 1. හ්‍රස්ව.

හ්‍රස්ව: අ, ඉ, උ, භ, ඞ, ඵ, බ.

දීර්ඝ: ආ, ඊ, ඉ, ට්‍ය, ඞ්, ඵ්, බ්.

#### 2. ගාත්‍ර.

##### a. වයිද්‍යා.

ක-වයි: ක, ඛ, ග, ඞ, බ.

ච-වයි: ච, ජ, ඤ, ඞ, ඞ.

ඵ-වයි: ඵ, ජ්, ජ්, ජ්, ජ්.

ඞ-වයි: ඞ, ජ්, ජ්, ජ්, ඞ.

ඵ-වයි: ඵ, ජ්, ජ්, ජ්, ඵ.

##### b. අවය්.

ය, ර, ල, ව, ශ, හ, ඞ, ඞ (ස).

34. Efter Taleredskaberne henføres de alle, baade Selvlyde og Medlyde, til følgende Klasser:

का, kaḥi-ja:	क, का: samt ख, ब, ग, घ, ङ (og ञ)
ता, tā-ja:	ट, ठ, ड, ढ, ण; ट, थ, द, ध, ण; त, थ, द, ध, ण
मु, mū-ja:	म, म; व, वि, उ, इ, ए, ओ, अ, इ, उ, इ, ए, ओ
दा, dā-ja:	न, ण; न, ण, द, व, न; न, ण
प, pa-ja:	प, फ, ब, भ; प, ण, व, न, म; प

De sing. Navne paa disse Klasser ere san. Tillægsord. Endelsen *ja* betyder *oprunden* eller, som vi sige, dannet med: *kaḥi*, *Strube*; *tā*, *Gane*; *mū*, *Hoved*, *Hjerne*; *dā*, *Tand*; *pa*, *Læbe*. Men de tre første Navne ere dels urigtige, dels ubekvemme; da 1) de ind. Sprog fattes alle egentlige *Strubebogstaver*, der findes i Arabisk; saasom Qāf, Ghain o. desl. 2) De o. s. v. ikke ere *Ganebogstaver*, efter vore Begreber om disse; og endelig 3) *Hovedbogstaver* eller *Hjernebogstaver*, intet Begreb giver os om Maaden at danne disse Lyde.

35. Man ser let at den ind. Bogstavordning med et sin Regelmæssighed, dog er langt fra den størst mulige Fuldkommenhed. Den første Urimelighed, som vil støde enhver Europæer, er at *Am* og *Ah* regnes blandt Selvlydene. Dernæst vilde det være langt naturligere at stille de fire første af de uundte i den Orden, hvori deres Stamme-selvlyde følge, nemlig: *y, w, r, l*, ligesom: *i, u, æ, ø*.—Fremdeles, da ethvert af Esserne vil befindes i næsten udelukkende Forbudelse med en vis enkelt Klasse af de stumme (jfr. 34.); vilde det være naturligt at henføre dem ligesaavel som Esserne til de behørigte Klasser, hvorefter man lettelig kunde bringe alle Bogstaverne under Klassefordeling.

I Henseende til Klassernes indbyrdes Anordning eller Folge bemærker Sir William Jones i sin Afhandling om den asiat. Retskrivning (1. Bd. af *As. Res.*) at den mærkværdige Bog *Toḥfatu 'l Hind* gjør *Ta*-klassen til den tredje, og *pa*-klassen til den fjerde, hvilket er en betydelig Forbedring; da det bringer Grundbogstaverne *t, d, n*, foran Afled-bogstaverne *p, ṭ, ṇ*; i samme Forhold som de to foregaaende Klasser, af hvilke *k, g, ṅ* ere langt væsentligere i den menneskelige Tale end *c, j, ñ*; hvorfor man og vil finde at *Ce*-klassen og *po*-klassen fattes i mange ypperlige og højlig uddannede Tungemaal, f. E. i Græsk, Hollandsk, Dansk, o. m. fl.

36. Paa disse Grunde vilde jeg fortrække følgende ny Anordning af Bogstavrækken,

*Selvlyde.*1. korte: *a*, *i*, *u*, *ā*, *ē*, *o*, *ā*, *ē*, *o*, *ā*, *ē*.2. lange: *ā*, *ī*, *ū*, *ā*, *ē*, *ā*, *ē*, *ī*, *ū*, *ā*.3. Tvælyde: *ei*, *ou*.*Medlyde.*

	<i>haarde</i>	<i>beaandede</i>	<i>bløde</i>	<i>beaandede</i>	<i>Næsebogst.</i>	<i>hvislende</i>
1. <i>Ganebogst.</i>	<i>k</i> , <i>kh</i> , <i>g</i> , <i>gh</i> , <i>ḡ</i> , <i>ḡ</i> .					
2. <i>Gummeb.</i>	<i>c</i> , <i>ch</i> , <i>j</i> , <i>j</i> , <i>ñ</i> , <i>ñ</i> .					
3. <i>Tandbogst.</i>	<i>t</i> , <i>th</i> , <i>d</i> , <i>dh</i> , <i>n</i> , <i>n</i> .					
4. <i>Tungeb.</i>	<i>ḥ</i> , <i>ph</i> , <i>ḥ</i> , <i>dh</i> , <i>n</i> , <i>ḥ</i> .					
5. <i>Læheb.</i>	<i>p</i> , <i>ph</i> , <i>h</i> , <i>bh</i> , <i>m</i> , <i>h</i> .					
6. <i>Kæheb.</i>	<i>ā</i> , <i>w</i> , <i>r</i> , <i>l</i> , <i>m</i> , <i>h</i> .					

37. Det hele synes herved at bringes i langt naturligere og skønnere Orden: hver to af Klasserne ere nærtbeslægtede, hvilket formodentlig har sin Grund i Taleredskabernes Beliggenhed. De tre første Klasser udtales med fastliggende, de tre sidste med bevæglige Taleredskaber. Den sidste kan ogsaa bekveemt benævnes *selvlydagtige* eller *Hulv-selvlyde*.

## 4. Udtalen og den evropæiske Betegnelse.

38. Den latinske Betegnelse udviser i de fleste Tilfælde tydelig nok Bogstavernes Lyd, og denne forbliver i alle Forbindelser den samme, hvilket er et stort Fortrin i de asiat. Sprog fremfor de fleste evrop., hvor Bogstavernes Udtale hyppig forandres efter deres Stilling i Ordene eller en uregelret Brug.

39. Selvlydene *a*, *i*, *u*, *e*, *o* have saaledes samme Lyd, som tillægges *a*, *i*, *u*, *e*, *o* af Italiæner, Spanier, Portugiser samt Tyske, Danske og Svenske. De tilsvarende lange Selvlyde erstattes ved (') over de nys anførte. Dette Tegn forlænger altsaa Lyden, men forander den ikke, og kan derfor bekveemt kaldes *Længde tegn*. (') udmærker en naturlig kort Selvlyd, som efter visse Regler er forlænget, og kaldes derfor med Rette *Forlængelse tegn*. (^) anbringes over en lang Selvlyd, som er kommen isteden for tvende korte, og kan derfor passende benævnes *Sammendingstegn*. (') viser at en Selvlyd er udeladt, og kaldes derfor med Rette *Bortkastelse tegn*, men disse tre Mærker ere langt nødvendiggere for San, og Pali end for Sing.

40. Det i Medlydene indbefattede korte *a* antager dog i Sing. ligesom i Tamul ofte en højere eller, saa at sige, smalle-re Lyd, der nærmer sig til *e*, men rettest betegnes ved *ā*, der udtrykker Tingen uden at forandre Tegnet. Det brede eller

klare *a* findes som oftest i Begyndelses-stavelser, i lukke Stavelser og efter *o*; det smalle eller høje *ä* i Slutnings-stavelser; aabne Stavelser og efter *o*; f. E. *o*o. *gaha*, (*et*) *Træ*; *o*o. *weyaw*, *rærer!*; *o*o. *gäiräyü*, *Ligeme*. Dette har ofte forledt evrop. Forfattere til at skrive disse Ord med *e*, hvilket dog er saare fejlagtigt, da det giver Anledning til Forveksling med Selvlyden *e* (*e* eller *ö*). Saaledes finder man hos Mahony *Noowereh* for *nuwärä*. *o*o. *en Stad*; *Gautemeh* for *Goutamah*, den san. Form af Buddhas Familienavn, i Pali *Gotamo*.

41. De san. Selvlyde *ä* *æ*, og *ö* *ø*, have vel nu, da Sanskrit er et dødt Sprog, taabt deres oprindelige Udtale. Af den Lyd, som nu tillægges dem: *iri, iru, ir, ri, rü — ulu, lru, lri, lü*, saavel som af deres Plads i Selvlydsrækken efter *i, u* og foran *e, o*; sees dog temmelig klart, at det har været et Slags *e*, og *ö*, forbundne med *r*, og *l*, det er: udtalte med en dirrende og rullende Bevægelse af Stemmen. *ä* var uden Tvivl overensstemmende med det slaviske *r*, som ofte ndgjör en egen Stavelse uden nogen anden Selvlyd; f. E. bömsk smrt (*d. e.* s-mrt), san. *metyuh*. *Dod*; *srdee* (*sæd-ce*), san. *hæd*, *Hjærtes* *æ* derimod har vel ikke været just vort danske *ø*, men denne Figur synes temmelig vel at betegne en Forbindelse af *i* og *o*. Vore Selvlyde *æ, ø*, staa dog i samme Forhold til hverandre som *i* til *u*, *e* til *o*, og *æ* til *ø*; men *æ* kunde ikke anvendes for *æ*, da det ikke er *a* men *r* der er forbunden med *e*.

42. Tvetydne *ei* og *ou* lyde som det danske *ej* i *knejse* og *øi* i *Lov*, det eng. *ei* i *height*, *Højde*, og *ou* i *our*, *vor*. Andre have betegnet dem *ai* og *au*; men baade deres Plads efter *e* og *o*, og deres Figurer i Devanagari saavel som i Singal. *o*o og *ö* samt *o* og *ö* — *o* ndiser tydelig at de ere dannede af *e* og *o*, og have intet at gjøre med *a*: *ai* og *au* have desuden i Tamul og andre Sprog deres egne bestemte Lyde, lig det danske *aj* i *Høj*, og *av* i *Hav*.

43. *Æ* og *ø* udtales højere end det danske *æ* og ligesom brægende, aldeles overensstemmende med finsk *ä* og *ä* i *lähde* (*d. e.* læhde), *en Kilde*; *pää* (*pæ*), *et Hoved*. Det grønlandske *æ* og *ø* formodes at have selvsamme aabne Lyd.

44. Af Medlydene have *k, g, t, d, n, s, p, b, m, v, r, l*, samme vel bekjendte og bestemte Udtale som i Dansk og Finsk, samt de fleste andre evrop. Tungemaal. Blot *ö* udtales i Singal. nærnere det eng. *w*, og skönt det stundum synes at svare til vort *v*, saa foretrække dog de Indfødte Betegnelsen *w* overalt, paa Grund af at *f* og *v* ere haarde Lyde, fremmede for de indiske Sprog, og vanskelige for Indianerne at efterligne. Dette vilde da udstrække Brugen af *w* ogsaa til Sanskrit og Pali, hvor heller intet *f* gives. En Omstændighed, som synes at afgjøre dette, er Overensstemmelsen med Zend, hvor *f* og *v* høves foruden *w*, men hvor *w* svarer til det sanskritiske og pa-



ikke *ø*, ligesom *v* til *æ*, og *st* til *ø*; f. E. *sān. wātah, Vind, Lust*, zend. *wāto*, pal. *wāto*, sing. *wātoyā*.—Yog *h* udtales som tysk, dansk og finsk *j* og *h*: det første er selvfølgelig altid *M*-lyd; det sidste udfordrede nødvendigvis et nyt Tegn, da det ellers vilde forveksles med det *h*, som udmærker de beændede *M*-lyde, og ikke egentlig danner noget Sammenstød med disse.

45. *Kh* og *gh* udtales ikke som det tyske *ch* og beændede *g*; *th* og *dh* ej heller som det haarde og bløde engelske *th*, hvor Aandelyden sammensmelter med de stumme Bogstaver, saa at den begynder og ophører tilligemed disse, og ganske forandrer deres Udtale: men i de indiske Sprog ligesom tilføjes Aandelyden efter at Grundbogstaverne *k, g, c, j, t, d* o. s. v. ere udsat udtalte med deres sædvanlige skarpe Lyd, omtrent som i de danske Ord: *Kækhed, Tryghed, Lethed, Godhed, onhæve* o. desl.; dog med den Forskjel at de ind. Aandebogstaver aldrig adskilles eller opløses i deres tvende Bestanddele, men altid høre til samme Stavelse. De kunne derfor rettest betragtes som Afledsbogstaver, der begynde med Grundlydene, og ende med Aandelyden.

46. Gummebogstaverne findes ej i Danskene, Ce er aldeles det ital. *c* i *cecità, Blindhed*; det eng. *ch* i *cheerful, munter*; hvad de Franske skrive *tch*, og de Tyske *tch*. Man maa vel erindre sig at det overalt beholder samme Lyd, altsaa og foran *a, o, u* (38).—Je er det eng. *j* i juice *Soft* eller *g* i giant, *en Riese*, det ital. *g* i gente, *Folk*; hvad de Franske skrive *gj* og de Tyske *dsch*. Begge disse Lyde stemme aldeles overens med de persiske Bogstaver *Cim* og *Jim*. *Ch* og *Jh* udtrykke de tilsvarende Aandebogstaver, og udtales paa nys beskrevne Maade (42.)

47. Tungebogstaverne ere ikke saa vanskelige at udtale og adskille fra Tændbogstaverne, som man i Almindelighed forestiller sig: de dannes som haardt *t* og *d* med Spidsen af Tungen foldet tilbage mod Ganen. Det angelsaksiske og islandske *þ*, *ð* har vel ikke just denne Lyd, men er her antaget som den eneste Afændring af *t* og *d*, der findes i noget evrop. Sprog, hvor den lat. Skrift er indført. *ph* og *ðh* ere samme Bogstaver, udtalte paa den (45.) alt beskrevne Maade.

48. Om Næsebogstaverne kan man mærke sig, at *ḡ* er vort *g* foran *g*; f. E. i *Konge*, og *ḡg* altsaa det græske *γγ* i *ayyolos*.—Her det ital. og fr. *gn* i *Signore, Seigneur*; det portug. *nh* og det spanske *ñ* i samme Ord *Senhor, Señor, Herre*; omtrent hvad vi paa Dansk og Islandsk vilde skrive *nj*; f. E. i Mandsnavnet *Njáll*.—*n* er et haardt *n*, udtalt i den øvre Del af Munden ligesom Tungebogstaverne (47). Det er her udtrykt med *n*, da det aldrig forekommer i Begyndelsen af Ordene, Singalerne forveksle det nu omstunder idelig med *m*.—*m* er det portug. Slutnings-*m* i *fin*, det franske *n* i *fin*, *Ende*; det forekommer heller aldrig i Begyndelsen. Dets Lyd er nærmere *m*; saa at man

endog i de Indfødtes Bogstavsrækker ofte finder det skrevne  $\text{q}\text{d}$  eller  $\text{q}\text{d}$  isteden for  $\text{q}$ , og foran en Selvlyd gaar det regelret over til  $m$ : dette er Grunden til den her antagne Betegnelse.

49. Af Hvislebogstaverne angives  $\text{t}$  for sammen sat af  $k$  og  $\text{t}$ .—Ce er et Slags hørdt  $s$ ; nogle ind. Stammer udtale det omtrent som eng. *sh*, tysk *sch*, lettisk og slaviske *sz*, og skille det fra  $\text{t}$  blot ved at danne dette i den øvre Del af Munden ligesom de andre Tungebogstaver, hvilket vel er den oprindelige Forskjel; men Singaleserne forveksle alle tre Esser hyppig med hverandre, da der i deres Oldsprog Elu, ligesom i Finsk, Estlandsk og Grönländsk, blot findes et eneste Hvislebogstav  $s$ .— $\text{s}$  er vel et aanderde  $s$ ; men dets Aandelyd er dog forskjellig fra de stumme Bogstavers (45.); nemlig svagere og nøje forenet med Hvislelyden, saa at den begynder og ophører tillige med samme, og danner saaledes et eget nyt Bogstav. Det betegnes derfor rettere med det släv.  $\text{z}$  end med *sh*.

50. H udtales lydelig i Enden af Stavelser; men da dette er vanskeligt, hører man stundum den foregaaende Selvlyd næsten gjentaget efter Ah; d. e. næsten *aha* for *ah*, *ih* for *ih*, *uhu* for *uh*, hvilket dog ikke er almindeligt i Sejlon, hvor det nærmer sig mere til Lyden af det tyske *ch*. Da det i Egenskab af  $\text{t}$  blot kan forekomme efter Selvlyde; saa kan det, uden at afstedkomme Forveksling, tillige bekvemt anvendes til at udtrykke de stumme Aandebogstaver (45.).

51. Det haarde  $\text{t}$ ,  $\text{c}$ , tamul.  $\text{t}$ , er hyppigt i Tamul, Malajala og de andre Sprog af den malebariske Klasse i Karnatik, det beskrives at dannes ligesom Tungebogstaverne (47.), og er saaledes formodentlig ikke uligt det slaviske  $\text{t}$ . Sir Wm. Jones sammenligner det med kymrisk  $\text{t}$ , troeligvis ikke uden Føje; men fra det spanske og franske  $\text{t}$ , port. *th*, ital. *gl* er det højest forskjelligt. Det forekommer mig som det ind.  $\text{t}$  og  $\text{c}$  svarer til det islandiske  $m$  og  $\text{t}$ , der ogsaa stundum skrives  $\text{t}$ ,  $\text{z}$  (f. E. *einn* eller *ein* *En*, *heill* eller *heil* *ket*); og heller aldrig forekommer i Begyndelsen af Ordene. Nu omstunder forveksle Singaleserne det idelig med  $\text{c}$ .

52. Til haardt  $\text{t}$  svarer haardt  $\text{t}$ , tamul.  $\text{t}$ , som ligeledes er hyppigt i de andre malebariske Sprog, men forekommer ikke i Sng. Det formodes at være det samme som det grönl.  $\text{t}$ .

53. Af de nu beskrevne Bogstaver forekomme dog de 4 Selvlyde  $\text{a}$ ,  $\text{u}$ ,  $\text{e}$ ,  $\text{o}$ ; de 10 stumme Aandebogstaver  $\text{a}$ ,  $\text{u}$ ,  $\text{e}$ ,  $\text{o}$ ,  $\text{t}$ ,  $\text{c}$ ,  $\text{t}$ ,  $\text{c}$ ,  $\text{t}$ ,  $\text{c}$ ; de to Næsebogstaver  $\text{a}$ ,  $\text{u}$ ; de to Hvislebogstaver  $\text{a}$ ,  $\text{u}$ , (og folgelig  $\text{a}$ ), samt  $\text{t}$  og i Folge Sidaat-Saḡgäräwä  $\text{a}$ , ialt 20 ikke i oprindelig singal. eller eluiske, men blot i de fra Sanskrit optagne Ord, hvilket er en mærkværdig Overensstemmelse med Telugu og de andre maleb. Sprog. samt Finsk, Estl. og Grönl. hvor de samme Bogstaver ligeledesfattes.—En anden Mærkværdighed ved den sing. Udtale er det, at man her ingen Sammenstød finder i Begyndelsen

af Ordene; Endog i de fra Sanskrit optagne Ord undgaar man saavidt mulig slige Tilfælde, ved at sætte i foran, udelade eller omsætte en af Medlydene; f. E. *आवा*. *āu-āwā*, *Forladelse*, udtales enten *ixau-āwā* eller *samāwā*; *वृद्धा*. *wrādhā*, *gammel*, lyder næsten *wurddhā*, og skrives stundum *वृद्धि*, *wārd-dhā*, *sau. wāddhah*. Ogsaa dette er en Egenhed, som Elu har tilfælles med den malab. Klasse og mange Sprog i Mellemasi-en, samt Finsk, Estl. o. fl., der heri ere modsatte Sprogene af vor (japetiske) Folket, hvor slige Sammenstød ere hyppige; f. E. *vri*der, *spl*itter; *schre*ye, *spre*che; *f*ango, *clamo*: *σκληρον*, *σφαγην*; pali *द्वारम्*, *dwāram*, *en Dør*; *प्लवामि*, *plawāmi*, *flyder*.

54. Til en sammenhængende Skrift-og Sprogoprøve anføres her Fadervor af den sing. Oversættelse af det ny Testam., som den lærde Engellænder Wm. Tolfrey ved Hjælp af den udnærkede indfødte Lærde Don Abraham de Thomas bragde til 2. Tim 2, 24., siden fuldendt og udgivet i Kolombo 1817. 4to. samt gjenneuset og paa ny oplagt est. 1820. 8vo.

මෙයින් නොපිටෙපේ යාහැකරවි කෙරේද කිසියෙහි වැඩවි  
නා අපගේ පිසාකන්වනන්ස ඔබවනන්සේගේ නාමය සුඛවේවා ඔබ  
වනන්සේගේ රාජ්‍යය ජවා ඔබවනන්සේගේ කැමැත්ත කිසියෙහි  
මෙන් භූමියෙහිද කරනු ලැබේවා අපේ දවස්පතා භෝජනය අපව අද  
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රෙන් අප ගලවා වැදගත් වන මක්නිසාද රාජ්‍යයත් පරතුමයත් මිනිස්  
තාවත් සදාකල්ම ඔබවනන්සේගේමය අමෙන්.

*Derfore I saa-ledes Bön gjörer! Hvor-ledes-vel?*

E-heyin topi mesé yájñā kāraw! Kesé-dā?

*Himmel-i høj-tærende vor Fader herre!*

Swargāyehi wæðā-sipinā apāgé piyānan-wahansā!

*Eders Højheds Nærn rent vordet! Eders Højheds*

*Obā-wahanségé námāwā soddhā wéwā! Obā-wahanségé*

*Rige komme! Eders Højheds Villie Himmel-i som*

*rājyāyā é.ā! Obā-wahanségé kæmættā swargāyehi men*

*Jorden-paa og gjort blive! Vor dag-lige Fæde*

*bhūmīyehi dā kārīnu læbēwā! Apé dawas-patā bhojānāyā*

*os idag give behage værdiges-du! Vore Skyld-gjörere*

*apāpā adā dī wadātā mæuāwā! Apé nayākārayanpā*

*vi Forladelse-blive som, vor Skyld-ogsaa os Forladelse*

*api xamā-wennāk men, apé naya-t apāpā xamā*

*blive behage værdiges du! Os Fristelse-i ikke havende-fort*

*wī wadātā mænāwā! Apā parixā-wīmāpā no pamunuwā,*

*ondt fra os frelse behage værdiges du; ti*

*napuren apā galawā wadātā mænāwā; mak-nisā-dā*

*Riget-og Magten-og Herligheden-og ewig-Tid-til-just*

*rājyāyā-t, parākramāyā-t, mahimatāwā-t sadā-kalhi-mā*

*Eders-Højheds-egen-er.*

*obā-wahanségé-mā-yā: āmen.*

# MINICOY AND ITS PEOPLE.

BY

OLIVER BARTHOLOMEUSZ,

L.C.M.C.,

*Late Medical Officer, Lighthouse Works, Minicoy.*

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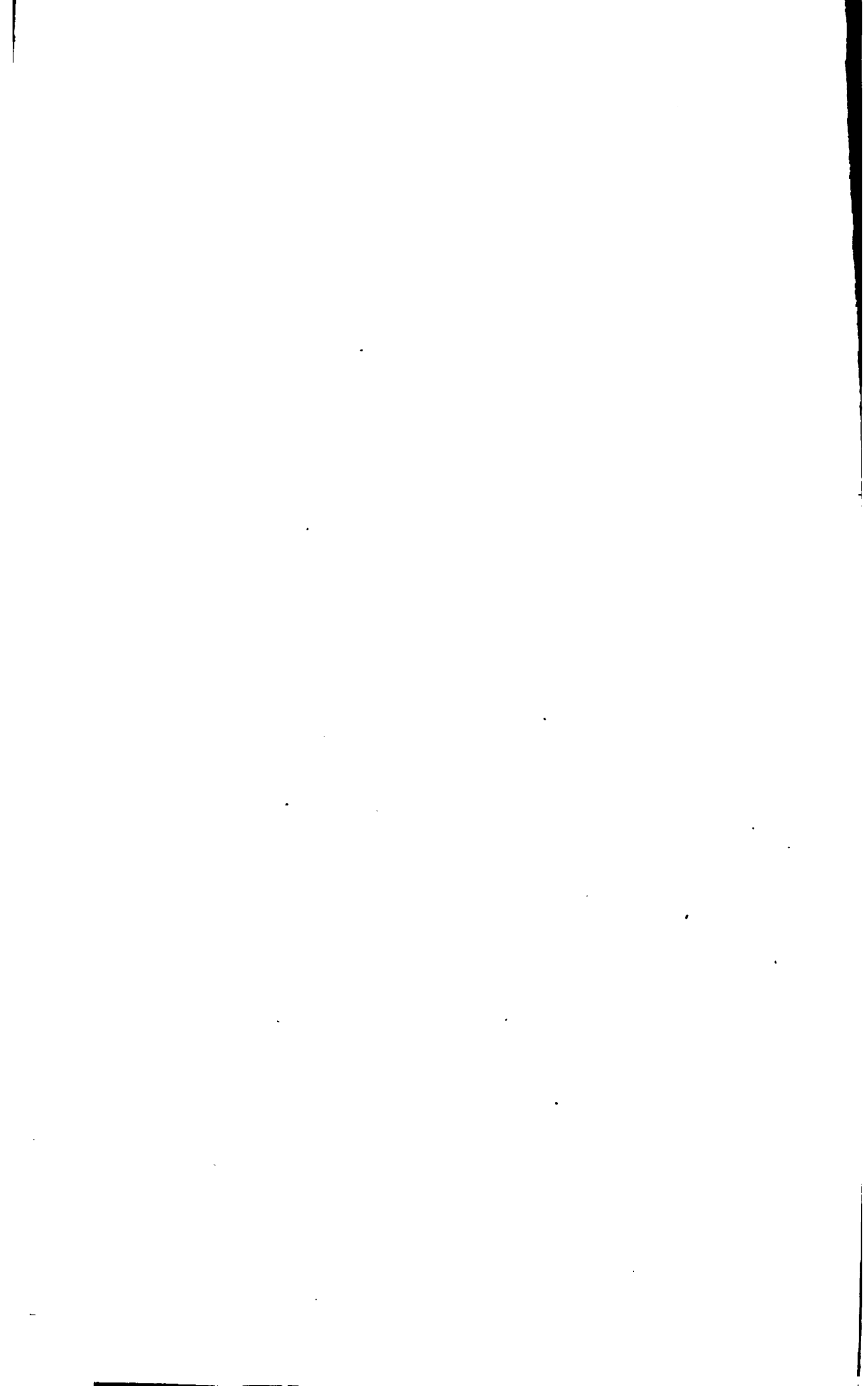
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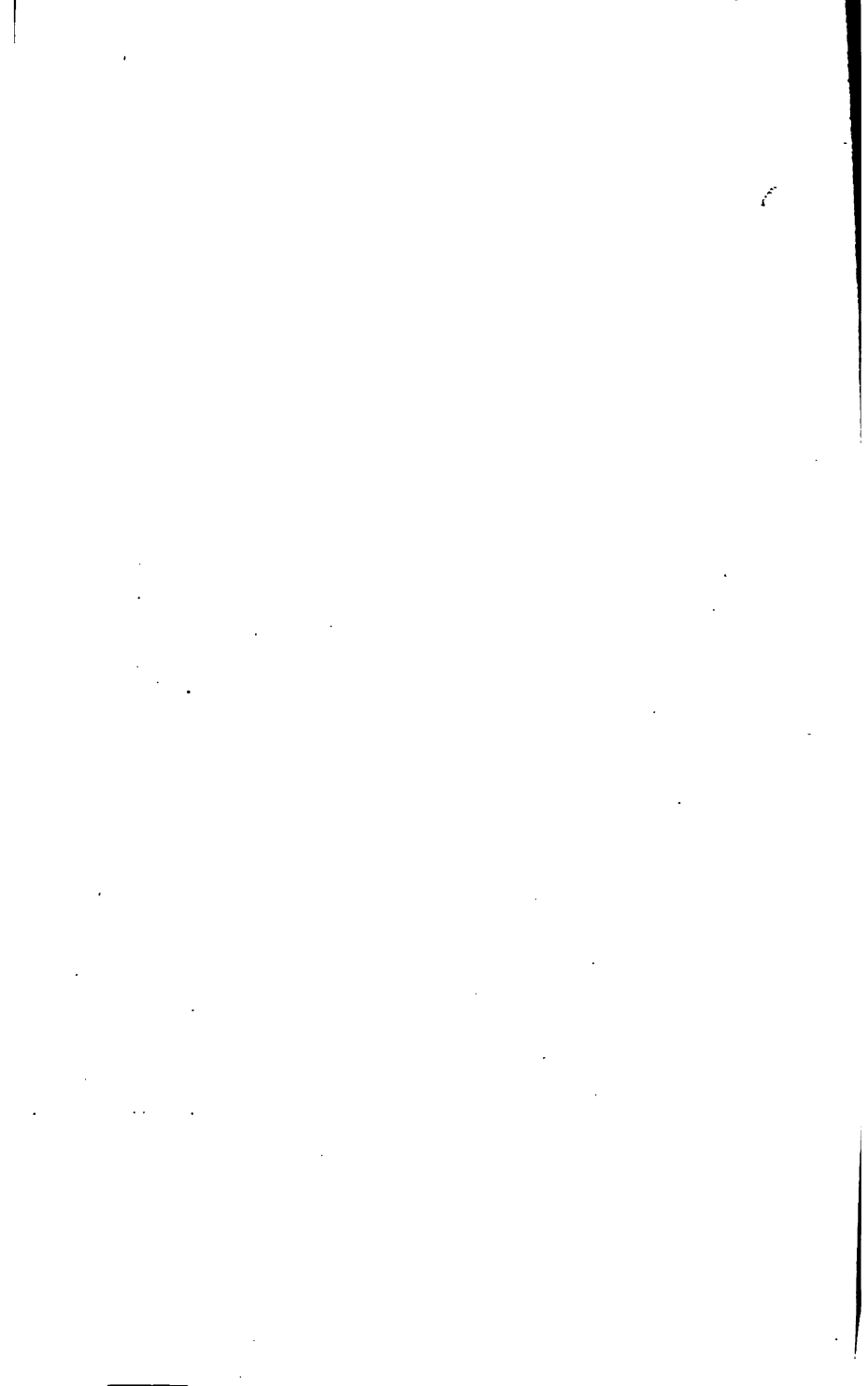
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## MINICOY AND ITS PEOPLE.

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### INTRODUCTION.

Minicoy, or "Malika," otherwise known by the natives as "Lakadadhebe," belongs to the group of coral islands called the Lakadives, which derives its name from it. The islands of this group differ from those of the Maldives, in that they are larger, and lie at a greater distance from one another; Minicoy, for instance, is more removed from the islands of its own group than it is from the Maldives. It lies about 100 miles to the south of the former, while only a distance of about 69 miles separates it from the latter; and Malie, the principal island of the Maldive group, is not half as extensive as Minicoy; but, though the islands of this group are comparatively large, they are very much less numerous than those of the Maldives. These two groups together stretch over a space extending about 1,200 miles from north to south, and of this more than two-thirds is occupied by the Maldives, which is said to consist of about 12,000 islets. These islands are grouped together by twos and threes, within girdle-like reefs, which are themselves often studded with little islets. Each such little group is called an "atoll" by the natives. So close together are these islets situated, that the natives are said to carry on a sort of telephonic communication from one to the other, by means of a cord, the ends of which are attached to the centre of a membrane stretched over the end of a hollow cylinder.

Minicoy is populated by the same race of people as those inhabiting the Maldives, but the other islands of this group are peopled by a race of Malabars, whose Hindu ancestors, it is said, escaped there from the shores of Southern India during the period of the Mohammedan conquests.

The islands of this group belong to the Government of Madras; each is governed by a native chief, called an Amin, who is appointed by the "Sirkar" or Collector of Calicut. The Maldives are tributary to the Government of Ceylon, and are ruled by a petty King, called a Sultan. His residence is in the island of Malie.



## GEOGRAPHICAL POSITION.

The interest attached to the island of Minicoy is from the fact of its having been selected by the Board of Trade on which to build their lighthouse, for the benefit of vessels passing through the "eight degree channel," of which this island forms the northern limit.

The island of Minicoy lies between lat.  $8^{\circ} 14'$  and  $8^{\circ} 19' N.$ ; long.  $72^{\circ} 59'$  and  $73^{\circ} 5' E.$  It is seven miles long and about half a mile broad at its widest part. It is semicircular in shape, and lies N.E. and S.W., with its concave border directed northward. Facing this is an irregular coral reef, also semicircular, which with the island encloses a large oval lagoon, the area of which is about 12 square miles.

Between the reef and the S.W. end of Minicoy, is a small islet which at one time formed a part of the island. It is used as a place of quarantine for small-pox patients and goes by the name of Small-pox Island.

Comparatively safe anchorage for ships is found about three miles to the east of Small-pox Island and half a mile to the north of the reef. This anchorage it must be said is not safe during the prevalence of the S.W. monsoon. In fact no vessel can with safety anchor anywhere about the island at this season. Ships calling here during the S.W. monsoon will find shelter near the N.E. end of the island, where a bend in the land affords some protection from the fury of the wind and waves; but the anchorage here is not considered safe at any season of the year, as the bank is narrow and shelves down very abruptly.

Toward the N.E. end of the reef is a wide gap which affords safe passage for boats and native vessels, but ships drawing more than ten feet of water cannot cross the channel or enter the lagoon. At a point about midway between the two ends of the reef is a narrow gap affording passage only for boats. This is the channel generally used by the fishing boats during the N.E. monsoon. It is through this channel too, that a great part of the material used in the construction of the lighthouse was conveyed to the island.

## GEOLOGICAL FORMATION.

The island as well as the bed of the lagoon is entirely of coral formation. A section across the island would be represented by first an almost perpendicular line from the base of the coral formation to the level of the bank; this is the region of the growth of solid coral, and the material formed here is firm, tough and compact, its structure and arrangement presenting a striking evidence in proof of a design in nature; for this part serves as a buttress to the island, and protects it most effectually from the fury of the waves. The blocks of coral found here are generally of a conical shape, with their cells radiating from the apex of the cone to its base, which is

as a rule slightly rounded. The cells are hexagonal or octagonal like those of a beehive, with this exception, that from each angle there is a solid plate projected inwards which meets its fellows at the centre. Another common variety of coral found here is of a more rounded form, and has its cells so arranged as to give it the appearance of the convolutions of a brain. Others again are flat, with very minute cells and thick, tough cell walls; this variety is hard as rock. These are some of the many varieties of solid coral forming the buttress of the island.

We next have to describe the upper surface of this buttress or the bank. This would be represented by a horizontal line drawn from the upper extremity of the first almost perpendicular one. The breadth of this bank from the beach to its edge is about an eighth of a mile. It is composed of a conglomerate of old coral and coral sand, and this is built upon again by more minute varieties of the coral insect, which helps further to strengthen and bind together the old material. This bank is exposed during low tides, and except opposite the bend in the island before referred to, it cannot be approached by boats. Opposite the bend it is broad and deep. A third oblique line drawn upwards from the end of the horizontal one would represent the beach. This is composed of fine coral sand, dead coral, and the débris of old shells. Part of the surface of the island passes through heaps of dead coral, which are thrown up by the tide. These lie bleaching in the sun, and in time decay and crumble down. Coming further inward, the soil is composed of bits of crumbled down coral, the débris of dead shells, coral sand, and decayed vegetable matter; and between this and the edge of the lagoon the soil consists almost entirely of fine coral sand and dead vegetable matter. The general surface of the island lies about five or six feet above the level of the sea; but about its centre, where the village of Minicoy is situated, it lies much higher.

The declivity of the lagoon and its bed are composed entirely of extremely fine white coral sand and coral mud. Many species of delicately branched coral find a suitable home within the lagoon where it is deep enough to retain the water during ebb tides. It must be mentioned here that the western half of the lagoon is shallow, and a great part of it is left almost dry when the tides are very low. Here, as a rule, the water is never more than five feet deep, even when the tides are at their highest. The eastern half of the lagoon is about three or four fathoms deep, but several large blocks of coral lie hidden about here, and render even boat sailing rather unsafe, except to those who are well acquainted with the position of the hidden dangers.

The reef rises rather abruptly from the bed of the lagoon. It lies high and dry during low tides, the exposed part of it being formed of heaps of large blocks of dead coral. The bank outside the reef is much wider than the one previously described, and seems

to descend in tiers like the terraces of a hillside paddy field. It is on this bank that ships calling here during the N.E. monsoon find an anchorage. It is about five fathoms deep.

## THEORIES REGARDING THE FORMATION OF CORAL ISLANDS.

According to the researches of Professor Darwin, the coral insect can not live below a depth of twenty or thirty fathoms. It can not be supposed, therefore, that these persevering little builders laid their first foundation on the bed of the ocean, for "within a hundred yards of the reef no bottom is found." What then is the basis of the coral formation? We can do no better than state here the different theories regarding the formation of coral islands in general, held by those who have made this a subject of study. One very commonly received at one time was that they were built on the craters of submarine volcanoes. According to another, banks of sediment composed of the silt washed down from rivers were supposed to form the basis of the coral growth. A third theory supposes the bed of the ocean to have been upheaved by volcanic forces to the required height, on which the coral insects laid their first foundation. And the fourth is that submerged mountains and islands form the basis of the coral growth. This last is the theory advocated by Professor Darwin, and, at least as far as these two extensive groups of coral islands are concerned, seems to be the most plausible one.

The submarine crater theory cannot be entertained in connection with these islands, for the lagoons enclosed by the coral growth are as a rule shallow; nor is it in the least likely that there ever existed so extensive a range of submarine volcanoes, as these thousands of atolls, scattered over a space of ocean twelve thousand miles in length, must lead us to suppose.

The silt theory can not hold good in this case, considering the distance of these islands from any large rivers.

It is considered improbable that volcanic forces should have heaved up the bed of the ocean into peaks or points of such an even elevation of twenty to thirty fathoms, without in a single instance bringing it up to the surface. It must follow, therefore, that submerged mountains and islands form the basis of these atolls.

It is well known that reefs of coral formation, more or less continuous, fringe the shores of Ceylon. If we were to suppose that the islands in the Straits of Sunda, submerged in 1883, were surrounded by similar fringes of coral growth, it is not at all unreasonable to expect that these rings of coral, growing as they do upwards and outwards, would at some future period reach the surface, and form circular islands, and with their enclosed lagoons occupy the site of pre-existent hills and mountain tops.

If, then, from submerged hills and mountains we can argue

the future existence of coral islands, it is nothing but reasonable that, with coral islands as a datum, we can argue the pre-existence of hills and mountains. It requires no great strain on the imagination to suppose that at some long past age, the site of these atolls was occupied by an island of large dimensions, perhaps as large as Madagascar or larger, and that a chain of mountains extended from north to south, like those in Madagascar, or like the Eastern and Western Ghats in Southern India. When, owing to subterranean forces, this great island sank, every high hill and mountain peak must have remained above the surface for a period more or less extensive, forming a vast range of little islands. Around the shelving bank of each islet thus formed, the coral insect laid the foundation of its circular reef, which, gradually growing upwards, in time reached the surface, while at the same time, the island gradually subsiding, sank below it to form the basis of the lagoon bed. Here pieces of broken coral, detached by the waves, were washed in by every tide; and these by the decay of time, the trituration of the waves, and the agency of coral-eating fish and zoophytes, have been converted into the fine coral sand and white chalky mud of which the superficial stratum of the bed of the lagoon is composed.

## FLORA.

Having thus briefly noticed the structure of the Island and the history of its formation, we proceed to the consideration of its flora. The cocoanut grows here in its wild state, and thrives with a wonderful luxuriance. Indeed the Island from end to end is covered with a thick growth of cocoanut palms. Clumps of screw-pine, with their aerial roots and tufts of long drooping leaves, grow about the water's edge, and perfume the air with the odour of their sweet smelling flowers. The almond and the banyan tree also flourish here uncultivated. There are very few fruit trees among those which grow without cultivation. Of these the bread fruit deserves special mention. The early Portuguese settlers in the East seem to have considered it indigenous to these islands; and their descendants in Ceylon still call it the Jack of the Maldives—"Jaka de Maldave"—the Jack or Jaka being the well-known timber tree of Ceylon, the fruit and floury nut of which are to the Singhalese "Goya," what the potato is to the Irish peasant. The soil of coral islands seems to be specially adapted to the growth of the bread fruit, which in some coral islands forms the staple article of diet among the natives. It may be said to resemble the fig tree somewhat in its growth. The leaf is large and divided into several finger-like sections. The fruit is more or less oval, being about six inches long through the core, and about twelve inches in circumference; its skin is of a light green colour, and has an irregular

pimplly surface. The substance of the fruit, or the part between the skin and the core, is firm and white; and when boiled is soft and floury, and forms a good substitute for potatoes.

The castor oil plant also thrives here uncultivated; it grows to the height of about eight or ten feet, and bears an oval seed about the size of a small bean, smooth and shining on the surface and mottled with dark spots. It is this seed, which, when crushed, yields the castor oil of commerce.

Almost all the shrubs, weeds, grasses, and creepers found here are those common to the western coasts of Ceylon. A few ferns, too, may be seen where the soil is damp and shaded, but they do not seem to thrive well.

It may be interesting to learn how all these trees and plants found their way here. The process of vegetation, in the first instance, must have been a very gradual one; plants of a more simple organisation being the pioneers; these by their decay enriching the soil and preparing it for the reception of those of a higher order; and these in their turn providing both food and shelter for their betters; and so on from grade to grade, till at last the noble cocoanut palm takes a firm footing among them and shoots its feathery crown high into the air, as if scorning to notice the moss and weed and shrub, its real but unassuming benefactors.

From recent experiments in botany it has been found that certain varieties of sea-weed can be cultivated on dry land. The growth of algæ on the surface of this island affords further evidence in proof of this fact, for there can be very little doubt of their being identical with those found on the reef. It must be supposed, therefore, that modified forms of algæ and sea-weed formed the first vegetation of this island; these, by their decay, prepared the soil for the reception and growth of seeds washed ashore by the tide, and as each succeeding generation of plants flourished and died, the soil was more and more prepared for the growth of plants and trees of a higher order. There is sufficient evidence to show that seeds and nuts are being continually washed ashore here by the tides, and these are such as are found on the western coasts of Ceylon and Southern India. Seeds and beans, too, are found here, which are common only to the hill districts; they are evidently washed into the sea by rivers and streams, and carried here by the tides.

## FAUNA.

The island contains no wild animals properly so called, and the few specimens of reptiles and insects found on it are such as are developed from the egg; the egg in the first instance having been doubtless washed ashore, attached to the stems and roots of trees that had drifted away from the coasts of India and Ceylon.

There are, fortunately, no snakes here; one, however, made its

passage to the island as a "stowaway," hidden between the knots of a bamboo, but it was soon discovered, and had to share the same fate as the gentleman we read of in history, who is said to have been drowned in a butt of malmsey. The liquor used in this instance, however, was not malmsey, but rum, which latter, although so destructive to the living, has undoubtedly great preservative properties over the dead.

Some of the winged insects, perhaps, were carried here by the wind. In March, 1884, we had a swarm of black crickets blown here by the winds of the N. E. monsoon; they continued to disturb us a few nights, but soon perished. At present (November, 1884) the air is alive with thousands of dragon flies, which are also said to come from over the seas; the natives meet with them while out deep sea fishing.

The mosquitoes, or as the old woman in the tale calls them, the Miss Kitties, deserve special mention; it will be a very long time before the members of the lighthouse building staff will forget them. As the story goes, the old woman was shocked when that part of her son's letter was read to her in which he described them as coming into his room through the chimney. We hope we shall not be sending her into hysterics when we say that the Miss Kitties of Minicoy think nothing of entering one's bed through the meshes of a two-fold curtain, and that they keep on saluting his face and ears in a very feeling manner, till he is obliged either to fall asleep in spite of them, or rush out of bed in utter desperation.

We have occasional visits from such birds as teals, gulls and curlews, and often when the wind is from the N E., some stray land birds from the coast of India find their way here. But as soon as the rough weather sets in and the wind begins to blow from the opposite direction, all our feathered visitors forsake us, leaving behind only the crane and the little white-breasted jungle fowl, which make this their permanent home. A few hawks may be seen during dry weather hovering about over the tops of the cocoanut trees in quest of rats; these latter evidently found their way here in the first instance hidden away in native vessels. They infest the cocoanut trees and are very destructive. They are large, and have thick, long tails, designed doubtless to help them in going up and down the long and slippery stem of the tree, and in crawling along its branches. The rat finds both food and drink in the cocoanut, which he bores through with a wonderful sagacity, directing his course through the husk in such a manner as to reach the most tender part of the shell possible. The hawk is not the only enemy of the rat, for when he comes down he finds the cat ready to give him a warm reception. There are scores of cats about the jungle, the descendants of stray domestic cats run wild; these thrive well on rats, mice and crabs, and seem in no way disposed to return to a state of domestication.

## HERMIT CRABS.

Speaking of crabs, we must take this opportunity of describing one variety of them which no stranger visiting these islands can fail to notice ; these are the hermit crabs. They are found in all sizes crawling about on the beach and under the trees, carrying on their backs a dead shell in which they place their soft sack-shaped bellies, which, if not for this borrowed protection, must render them an easy prey to their enemies. As they increase in size, they shuffle off their old tenements, and enter into such as better suit their altered growth. Some hardy old ones attain such a size that no dead shell can be found capacious enough to contain them ; they are not at a loss, however, when they reach this stage, for in the tough shell of the cocoanut they find a splendid substitute.

The description of the hermit crab leads us conveniently to a consideration of some of the various forms of animal life found in the waters of the lagoon. It would be beyond the scope of this essay to dwell on all the different varieties of fish, reptiles, crustaceæ, insects, and zoophytes that people the lagoon and the moss-covered reefs. Nor is it possible here to describe the spangled beauty of the many colored rock fish as they sport among the coral, or to speak of the wonders of the flower-like actinia or the plant-like zoophyta hydroida, which at once partaking of the nature of plant and animal seem to form a connecting link between two great kingdoms of nature. Indeed, the grateful mind that recognises the hand of an Almighty God in the star-spangled firmament and the boundless ocean, must in these hid treasures of the sea acknowledge the providence that tints the flowers and clothes with beauty and comeliness even the meanest of His creatures.

## OCTOPUS.

Most of us have at some time or another heard of the Octopus. We had the pleasure of securing two of these, and one of them was sent, preserved in spirits, to the De Soyza Museum. It has a purse-like body with a beak-shaped head and face, and from between the head and body are projected eight long tentacles, each of which is provided with three rows of cup-shaped suckers. These tentacles armed with the number of suckers are very powerful in their grasp ; and where the animal is large and strong, an encounter with it is attended with danger. We take the liberty of inserting here a quotation from an English paper pertinent to the subject. "A Victoria (Australia) paper reports that recently a gentleman had a rather unpleasant encounter with an Octopus whilst bathing alone on the southern side of Middle Island, in one of the many dark and silent pools of salt water which remain trapped after each receding tide. He struck away to explore a grotto-like opening in the rock

which he discerned on the opposite side of the pool. He penetrated the cavernous aperture, but no sooner did he attempt to regain his footing than he felt himself seized by the left leg. Thinking it was a loop of seaweed he shook himself; and repeating the process with some violence, he found his action resisted; and the next moment he was prone on the floor of the cave. No sooner was he down than both his legs were entangled; and sitting waist-deep in the water he saw, to his intense horror, the spreading arms of an Octopus, and quickly felt the sucking tentacles on his unprotected limbs. In another moment the head of the repulsive monster was seen dimly through a surrounding of murky fluid. Its parrot-beak touched the breast of the adventurous swimmer before the real gravity of the situation was experienced. Realising his peril the bold explorer tore with fierce energy the manifold strips of slimy flesh which were darting forth to enfold him. The struggle was a long one, but at length the horror stricken man had the gratification of seeing the long arms of his foe paralyzed, and drop from his nervous grasp. With a vigorous wrench he managed to free himself, bleeding, breathless, and well nigh beaten in his terrible battle with the sea monster; and regaining the upper earth, he lost no time in making his way to the opposite shore."

Large numbers of sea serpents are found among the reefs and in the mud of the lagoon. The larger varieties of them are of an ash-grey colour, mottled with little dark spots. Some of them attain an enormous size, the largest being as thick as a man's leg. The smaller varieties are as large as the common fresh water snakes of Ceylon, but are very much prettier, being mottled and streaked in bright colours. None of them are considered venomous.

### BECHE-DE-MER.

The shallow portion of the lagoon abounds with *Holothuriæ*, commonly known as the sea leech, or "Beche-de-Mer," and said to form a favourite dish among the Chinese. These are of a black colour, and are from eight inches to a foot in length. They are provided with several rows of suckers along their body for purposes of locomotion. Their oral orifice is surrounded by several filamentous tentacles, which, when projected, resemble the stamens of a flower. Something very peculiar with these creatures is that at death they eject their organs. Like most other zoophytes found here, the *Holothuriæ* live on dead coral. Another very common occupant of the bed of the lagoon is a white worm, about a foot and a half in length. It buries itself perpendicularly in the soft sand, keeping only its oral orifice exposed. On being approached when the tides are out, these little creatures draw themselves in, and while doing so squirt out little jets of water into the air. To a stranger walking on the sands here, these miniature fountains must



appear strange and interesting. These worms are much sought after by the natives, who use them as bait for fish.

The coral insects deserve special mention. They are zoophytes, and belong to the class called polypi. They have a soft cylindrical body, with a mouth surrounded by tentacles at one end, while the other end is attached to the coral. On picking up a lump of live coral, it is found to be coated with a strong-smelling mucilaginous fluid. This fluid is evidently secreted by the insect in order to attract the calcareous matter held in solution in the water, and perhaps, at the same time, it serves as a protection against coral-eating fish and zoophytes. The calcareous matter is assimilated by the insect, and helps to form the hard protecting envelope in which it is enclosed. The coral insects are said to develop their species by means of eggs, as well as by granulations, which spring from different parts of the surface of their bodies, and never become detached.

The lagoon as well as the banks outside abound with turtles; they are of two kinds, the shell turtle and the rock turtle; the former is scarce and is highly valued on account of its shell, which is the well-known turtle shell of commerce. The rock turtle lives and thrives unmolested, as the natives, being Mohammedans, are forbidden the use of it as food. They make no scruple, however, to eat the egg of the turtle, which it lays and buries in the sand of the sea-shore to be hatched by the heat of the sun. The egg, which is perfectly round, is half the size of that of the common fowl, and in place of the shell it is covered with a soft parchment-like skin. A turtle is said to lay from fifty to two hundred eggs, which, according to the accounts of the natives, are hatched in about eight or twelve days. The young ones fall an easy prey to the large sea snake, their great enemy, and very few of them escape. A full sized turtle measures about five feet from head to tail, and three feet from side to side. A fact worth noticing in a turtle is that it retains its muscular contractility for a long time after death; the heart, for instance, continues to beat for ten or fifteen minutes; and the eye in the severed head of a turtle was observed to respond to irritation for fully half an hour.

Several varieties of shells are found on the reefs; the prevailing class here is the univalve. The little white cowry has its habitat in the bed of the lagoon. It is collected by the natives and exported to India, where it is used as money by the "ryots" or peasants of the villages of Bengal.

Of the fish caught in the lagoon, one resembling the mullet and another very like the seer fish of Ceylon are the most palatable. A long-nosed fish resembling the "Hurullo" of Ceylon, is very common. Several young sharks and dog-fish come in with the tides in quest of their prey; and it is interesting to watch the movements of the shoals of little fish as they attempt to escape their enemy, now darting away from the centre, now coming closer together, now

moving in a circle, and now as if with one mind springing into the air. But all their attempts are in vain; the enemy never leaves them till he has had his fill. Large numbers of cray fish and crabs are found on the reefs and around Small-pox Islet hiding in the crevices of dead coral. None of the crabs are edible, but the cray fish are much sought after and are easily caught when the tides are low.

### CLIMATE.

Minicoy enjoys a comparatively warm and dry climate. It is decidedly malarious, but less so than the islands of the Maldivian group. The weather is greatly influenced by the N.E. and S.W. monsoons; the former prevails from October to April, and the latter from May to October; the latter is the more severe of the two and commands the greatest amount of rainfall. The wettest months are June and July. The weather in 1884 was exceptional, and it was very wet in August and September too. The most dry and hot months are from January to April, and the coolest months are October, November and December. The thermometer in the shade at noon, in the hot months, stands between  $85^{\circ}$  and  $90^{\circ}$ , and at early morning in the cool months between  $75^{\circ}$  and  $80^{\circ}$ .

### POPULATION.

The inhabitants of Minicoy, numbering between two and three thousand, as previously stated, belong to the same race of people as the Maldivians. According to the tradition of the natives, their ancestors came here from the Maldives shortly after those islands became populated. But, as to the source from whence these received their first population, tradition is almost silent. The natives, however, believe them to have emigrated from the shores of Ceylon. At all events there is sufficient evidence to prove that these islanders are the descendants of a colony of ancient Singhalese. Whether these people came here directly from India, at the same time as their fellows emigrated to Ceylon, or whether they came here subsequently from that island, is however a matter of uncertainty.

### ETHNOLOGY.

One striking proof of their affinity with the Singhalese race may be observed in their physiognomy. As in Ceylon and elsewhere, so here, the lowest castes preserve this originality best. The "Raveries" of this island, corresponding in the grade of social life with the "Hakuros" and "Rodias" of Ceylon, are from the nature of their occupation (toddy drawing), confined to their island home, and have no occasion to take to themselves wives from among other nations; nor are their women sought after by strangers settling here, who, being either seafaring men or traders, take rank with the higher castes and marry among them. Hence it is that among these may

be found a stronger resemblance to the Singhalese than among the higher classes. The men are well built, strong and muscular, averaging in height between 5 feet 2 inches and 5 feet 6 inches ; they are of a dark copper colour, and have angular features, with dark eyes and well shaped noses, and foreheads of medium width. The women are small but have shapely figures, with small feet and hands. They are of a lighter colour than the men, and have long, straight, black hair. Among the majority of the men and women of the other castes the features of the Moors and Singhalese seem to be blended. The remaining few show, either by their hair, features, or colour, an intermixture of African, Arabian, or Malabar blood.

The next great proof of a Singhalese origin is the language of the people, which is the same as that spoken by the Maldivians.

"Mr. Gray seems right in conjecturing that if the Singhalese were the first colonists, they were probably there as far back as the beginning of the Christian era, when Ceylon was a powerful monarchy. It can hardly have been much later than this period that Elu (the pure Singhalese) was the vernacular of Ceylon, unadulterated by the Sanskrit and pali infusions. And it is to this form of Singhalese that the Maldivian language approaches nearest. Indeed it may be preferable to assign to the original colonisation of the group a date synchronic with that of Ceylon itself (viz., several centuries before the Christian era) by a distinct isolated party of the same Aryan adventurers, and to presume a subsequent direct immigration from this island."\*

### LANGUAGE.

A glance at their numerals will show how much they resemble those of the Singhalese even as spoken at the present day ; they are these :—

#### MALDIVIAN AND SINGHALESE NUMERICALS COMPARED.

ENGLISH.	MALDIVIAN.	SINGHALESE
One	Eka	Ekkai
Two	Dha	Dhekkai
Three	Thenen	Thunnai
Four	Hatharā	Hatharai
Five	Fahā	Pahai
Six	Ha	Hayai
Seven	Hathā	Hathai
Eight	Arā	Attai
Nine	Nua	Namai
Ten	Dhea	Dhayai
Eleven	Ekkolos	Ekkolahai
Twelve	Dholos	Dholahai

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\* "The Maldivian Islands," by H. C. P. Bell, Esq., p. 21.

From twelve upwards the original numerals are lost, and the more intelligent classes continue their calculation in the Hindustani or a corruption of it ; while the women and others continue counting by twelves after the following style : Ek-dholos, Dha-dholos, Theen-dholos, Hathara-dholos, Pas-dholos, and so on.

### FURTHER EXAMPLES OF AFFINITY.

The following is annexed as a further illustration of the affinity of the two languages, and here it will be observed that the sister words are almost identical.

ENGLISH.	MALDIVIAN.	SINGHALESE.
Sugar	Us Hakkuru	Us Hakkuru
Fish	Mas	Mas
Male	Perehena	Peremia
Female	Anghena	Angena
Foot	Pa	Paya
Teeth	Dhai	Dhath
Head	Isthari	Issa
Shoe	Pa-vahan	Vahan-sanhala
Medicine	Bās	Bāth
Fever	Hūn	Unna
Child	Dharri	Dharrawa
Month	Mās	Māssa
Mother	Ammu	Amma
Firewood	Dharu	Dharra
Moon	Handhu	Handha
Sun	Eru	Era
Salt	Lonu	Lunu
Day	Dhuwalu	Dhawal
Night	Ragandu	Ra

Since the introduction of Mohammedanism the Mohammedan calendar has been adopted and the months are generally called by their Arabic names, and the native names applied to them by the women and lower caste men have some reference to the fasts or feasts or other religious observances which characterise each of these months. They are as follows :—

### NAMES OF MONTHS.

1. Rhoda-mas, the month of the fast (Ramadān.)
2. Kuda-Edu-mas, the month of the little feast of Edu.
3. Dha-Edu-dhathara-mas, the month between the two Edus.
4. Bodu-Edu-mas, the month of the big feast of Edu.
5. Kande-mas, the month of congee (this has reference to the Muhurum, when for ten days congee is used in place of ordinary food).
6. Safara-mas. This is the Arabic Saphar.
7. Duwa-mas, the month of prayers (Rabia) ; prayers are read in every house.

8. Manikuwanu-maluda-kea-mas, the month of reciting the chants at the Manikuwans.
9. Maduakera-mas,
10. Pahua-kera-mas,
11. Thēn-maha-rodha-mas, commencement of three months' fast.
12. Handu-kanda-mās, the month of pounding rice (for the preparation of sweets, to be eaten at nights during the fasting months).

This method of identifying the months may remind the reader of the description given by travellers, of certain African tribes, who divide the day in something after the following manner: the hour of cock crowing, the hour of milking the cow, the hour of the sun's reaching the place of the rice mortar, the hour of taking the cow to water, and so on.

Although the ancient names of the months have been thus committed to oblivion by the introduction of the new religion and its attendant changes, the names of the days of the week still preserve much of their original purity, and point to the descent of the people using them from progenitors among whom the sun, moon, and other heavenly bodies were held in veneration. The following are the

### NAMES OF DAYS.

ENGLISH.	MALDIVIAN.	SINGHALESE.
Sunday.	Adhitha.	Eredha.
Monday.	Homa.	Handhudha.
Tuesday.	Angara.	Angaharuwadha.
Wednesday.	Budha.	Badhadha.
Thursday.	Buraspathi.	Buraspathindha.
Friday.	Hukura.	Sikuradha.
Saturday.	Hunira.	Senasuradha.

The natives read even prose in a singing, recitative manner, like the Singhalese, and the style in which they sing their "geeths" or secular songs can scarcely fail to remind a Ceylonese of the long drawn monotonous singing of the "Sepedhas," by the low country cart driver or the Kandyan "Goya."

Although there is such a striking similarity between these two languages, it is surprising to note the dissimilarity between their alphabets: neither in name nor formation do the Maldivian letters resemble the Singhalese; and the question, therefore, may well be asked whether the Singhalese existed as a written language at the time the exodus to these islands took place. The supposition, founded on internal evidence, is that the Maldivian alphabet is a corruption of the Arabic. It must, therefore, have been introduced about the same time as the Mohammedan religion, which, according to the tradition of the natives, took place between four and five hundred years ago. If these islanders had an alphabet of their own prior to this period, it is hard to believe that they should have so

utterly abandoned it for a new and strange one, while still retaining their ancient language. And yet it seems unfair to suppose that a people so far advanced in other matters should have had no written language of their own till a period comparatively so recent.

### ORIGINAL RELIGION.

The general belief among the islanders is that their ancestors were Buddhists. Idols carved out of coral have been met with till very recently, and there still exist, in close proximity to each other, the ruins of a Buddhist temple and of an artificial tank. They are situated on a mound of coral at the back of the village, and are covered over with jungle. The floor of the temple seems to have been considerably below the level of the surrounding ground, and suggests the idea of intended secrecy, as the island has been subject, from a very recent period, to the attacks of pirates from the coasts of India. On the same side of the island as this ruined temple, and between it and the site of the lighthouse, may be seen at different intervals from one another the ruins of several coral-built caves, whither the islanders used to flee for refuge during the invasion of the mauraders. The cave nearest the lighthouse is in almost a perfect state of preservation. It is about three feet deep, four feet wide, and eight feet long. The walls are regularly built of small flat coral, and the roof is covered over with large slabs of solid coral. An opening in the roof affords means of ingress and egress.

### PRESENT RELIGION.

As previously stated, the islanders are all Mohammedans. According to tradition, the new religion was introduced here between four and five hundred years ago by Boduthakuru-wan, a religious reformer from the Maldives. He is said to have gone there originally from Southern India. Under his teaching the natives forsook idolatry, destroyed their images, and embraced the faith of Islam. The principal items of their creed may be summed up in a few words. They believe in God the Creator, and that Mohammed is His prophet. They also believe in a future state of eternal bliss and in a future state of eternal misery. All true Mohammedans who have learned the Koran, said their prayers regularly, and observed diligently the precepts of the prophet, will at death be translated to the abode of the blessed "Swargā." But all Mohammedans who have been such only in name, and all Christians, pagans, and other unbelievers, will be cast into hell (Narka). The punishment of the Mohammedans will, however, not be everlasting, for at the end of forty thousand years they shall be delivered by their prophet.

They recognise many of the Old Testament worthies, and are able to narrate the events connected with their lives, but with many

variations and modifications. They believe in Christ as a prophet, "Esa Nabbi," and recount some of the miracles wrought by Him, which in the main correspond with the description given of them by the Gospel writers. Let us hope and pray that the time is not far distant when they shall believe in Christ, not only as a prophet, but as the prophet of God and the Saviour of the world.

The principal mosque is situated in the heart of the village, and is presided over by a high priest. Here all true Mohammedans are expected to meet every Friday noon for prayer. Several smaller mosques lie in different parts of the village, and are in charge of priests of a lower order, who not only conduct the daily worship in their respective mosques, but also have to announce, in a loud voice, the hour of prayer, at the hearing of which every Mussulman is expected to engage in worship.

### EDUCATION.

Children of both sexes are taught to read and write, and they are all expected to commit to memory the prayers and certain portions of the Koran. The teachers are either laymen or priests, and education, such as it is, is given gratis.

### AMUSEMENTS.

Almost the only toys used by the children are models of boats, many of which are elaborately carved and painted. It is interesting to watch the little ones swimming after their boats, as they float away with their diminutive sails filled with the wind. The children take to the water like amphibious animals, and they learn to swim almost as soon as they can walk and run. It would be quite exceptional to meet with a boy or girl above five or six years old who is unable to swim. In learning to swim they use a float on which to buoy themselves. This float is a piece of light wood, about two feet long and six inches thick, flat on the upper surface, and shaped under like the bottom of a boat. With this placed lengthwise under their chest and belly, the little ones float fearlessly on the water, and propel themselves with their arms and legs.

Fishing with the rod and line and kite flying are amusements the boys are fond of, and they also know the use of pop-guns, which they make from the branches of trees having a soft central pith, but they do not seem to know the use of marbles or tops; nor do the girls know what dolls are. Children as well as grown up people are fond of playing on the tom-tom, "beru."

There is a game called "Edu Kalu" (so named from being played principally during the feast of Edu), in which both girls and boys and young men and maidens join. The young people meet at an open place and take sides, an equal number of girls on one side, and an equal number of young men on the other. Lines are drawn on

the sand like in the game known as "thattu" in Ceylon, and a young man is stationed at each line, and has to guard it from being crossed over by his opposite partner. If he touches her while crossing, she "is out," and has to pay him a forfeit, which generally consists of a chew of betel. And so the game goes on, each set having to guard the lines when the other is defeated.

Games of skill, played on the same principle as chess or draughts, are not uncommon among grown-up people.

### COSTUME OF THE WOMEN.

The dress of the women seems to be peculiar to this and the Maldiv Islands. It consists of a cloth worn round the waist and kept in position by a silver girdle; and over this a long loose tunic, "libbas," reaching from the neck to a little above the ankles, with sleeves up to the wrists. The collar of the tunic is beautifully embroidered with threads of different colours, and has a slit and button on either side instead of in front or at the back. All classes of women and girls wear this tunic, and they look very decent and modest in them. They are made either of silk or some less costly material, according to the social position and means of the wearer. Only two colours are used, and they distinguish the upper from the lower caste women; that worn by the former is red with black stripes, and by the latter yellow with black or brown stripes.

### JEWELRY.

The women, as is natural to their sex, are fond of jewels; but, unlike most other women, they wear nothing round their necks. They make up for this, however, by their profusion of bangles and ear-rings. What attracts one's attention at first sight are their bangles. There are two kinds in common use. The low caste woman wears a set of three bangles on each arm; they are made of brass, are spiral, and extend from the elbow to the wrist, tapering from top to bottom. The high caste woman wears a set on each arm made of silver, and extending from the wrist to the elbow. Each set consists of about twenty-four distinct bangles, increasing in size from the wrist upwards. The united weight of all the bangles worn on each arm amounts to about three lbs.; and it is not uncommon to see women with warts on their wrists, caused by the friction of the lowermost bangle, which has to bear the weight of all the rest when the arm hangs down. What tortures even semi-civilised women endure to please the whims of cruel Queen Fashion! They wear several ear-rings like the Moorish women of Ceylon, about eight or ten along the border of each ear. Nose-rings are unknown among them, and finger-rings are very little used. They have fine dark hair, which they do up into a sort of chignon, like some of the Tamil women, and over this they wear a blue silk kerchief when fully dressed.



## PAINTING OF EYEBROWS.

All of them go in largely for painting; not like many of their more civilized sisters, however; for it is not their cheeks they paint, nor is it rouge they use; but it is the ancient Eastern custom of painting their eyebrows and the borders of their eyelids that is carried on among them. This is evidently the kind of painting referred to by the Prophet Jeremiah (Jer. iv. 30). The paint is a thick, tarry substance, of an intense black colour, and is said to be prepared from burnt almond shells or frankincense. The natives call it "handun," and in Hindustani it is known as "summa." The painting does certainly lend a peculiar charm to the countenance, especially if it be that of a "cudabebe," or young woman.

## SOCIALITY.

The women are more free and social than their Mohammedan sisters in India and Ceylon. Indeed, on visiting at their houses they received us cordially, and were ready to hold conversation with us if we could only understand their dialect. Some of them would even point to their jewels and other articles of interest among them, and try to teach us their native names. Nor were the visits one-sided, for often has our bungalow been graced by the presence of the fair sex of Minicoy. They visited us in groups, and were of course attended by their husbands or brothers. They admired the construction of our bungalow, built as it was on piles driven into the bed of the lagoon, and almost every article in it attracted their admiring gaze. Our clocks, pictures, lamps, and watches were objects of special interest to them; and more than all these, a sewing machine belonging to our Engineer, Mr. Edmond, a description of whose wonderful accomplishments by the first visitors excited the curiosity of all the feminine portion of the village, and for many long weeks and months the poor machine had scarcely any rest, having to sew and braid, and tuck and tuck, and braid and sew for the delectation of the "bebes" of Minicoy.

The women are good natured and kind towards each other, and love their children. Their well-combed hair, clean faces, and spotless garments testify to the fact that they observe personal cleanliness; and not only are they satisfied with being clean themselves, but they see that their children, too, are clean. They are, as a rule, active and industrious, and judging from their clean and comfortable homes, their pretty dresses, and other little household articles, their well-cooked food and tempting sweets, it must be remarked that they make good housewives. And more than all this, it must be said to their credit that they take a very important part in the chief industries of the island; the manufacture of coir rope and the well-known Maldivian fish is almost entirely the work of their hands.

Our "bebes" are fond of pleasure, although the sources of amusement are so limited here; and of these few, boat excursions on

the lagoon and the game of "edu kalu," before referred to, are their favourites. They seem to be strangers to courtship and love-making, for before they attain the happy age of sweet seventeen they are wives and mothers.

Much pleasure was afforded them early in the history of our stay here, when a large boat built by our Engineer was launched at his request by the Amin's pretty daughter, Miss Amina. She is Mrs. Hussen Manikawan now, and has a little baby boy. The arrangements for the launch, the sliding form on which the boat was placed, the greased ways, the weights and ropes, were all perfect. The little vessel was gaily decked with flags and streamers of all colours. Our pretty maid was, chisel in hand, at her post, and "her sisters and her cousins, whom she numbers by the dozens," and her aunts and her friends, all took their places in the boat. At a given signal the rope was severed, and amid the shouts and hurrahs of the assembled crowd, the little vessel glided gracefully into her native element, carrying with her the fair freight of mirthful "bebes."

### MATCH-MAKING AND MARRIAGES.

In the matter of marriages the parents of the intended couple are, as a rule, the match-makers. When everything has been settled agreeably between them, both parties take the young people to the Kachcheri, where the marriage is registered by the Amin. The parties then separate for the day, and the evening is spent by the bride's parents in entertaining their guests at the marriage feast, each class or caste being received separately. Relations and intimate friends remain over to meet the bridegroom, who comes at midnight attended by his friends; and then the religious part of the marriage ceremony is performed by the priest, "Mudhim," and the young people are declared man and wife. Like in the "Bene" marriages of Ceylon, the husband, as a rule, marries into the family of his bride, and shares her home.

A girl is considered marriageable when she is about thirteen years old, and is said to be "achcha nai" ("no good") as soon as she passes her teens. Men generally marry between the ages of nineteen and twenty-three.

### MARRIAGE OF THE AMIN'S DAUGHTER.

While on the subject of marriages, we are reminded of the wedding feast we (the officers and foreman of the lighthouse staff) had the pleasure of being present at, about a year ago. The bride was none other than Miss Amina, the pretty daughter of the Amin, who launched the boat, and the bridegroom, Hussen Manikuwan, a young man of about twenty, a relative of the late Amin. We had a pleasant sail to the village, and on reaching the wedding house found the place illuminated and decorated in the Mohammedan fashion, and our friend, the Amin, waiting to receive us. After the

usual salutations we were seated, and immediately fell to taking stock of what we saw around us. Among other things a pair of curtains claimed our admiration; they were said to have been designed and made on the island, and were really fine specimens of native skill and workmanship. The feast consisted of an endless variety of dishes, for the perfection of which all the elements had richly contributed. The more substantial part of the meal being over, we were treated to sweets and sherbet, and this inoffensive beverage was heartily drunk to the honour of the bride and bridegroom, in response to the toast proposed by the chief guest.

The marriage ceremony was to have been performed in the house at midnight, when the bridegroom was to come in procession, attended by his friends and relations. For this, however, we could not wait, as we had a long walk before us, the wind and tide being against us for sailing back. We were, however, presented to the bride, who was led out to us by her father from the "gha," or female apartment, where, with her friends and sisters, she was preparing to meet the bridegroom. She was richly attired with silks and jewels, and looked a charming young bride indeed. We paid her our compliments, and wished her health, prosperity, and happiness, and with this we brought our visit to a close.

### COSTUME OF MEN.

There is nothing very peculiar in the costume of the men. It consists of a pair of drawers ("pyjama") and a cloth round the waist, both made fast with a belt or kerchief, or, in the case of low caste men, a girdle made up of several coils of thin rope made of goat's hair. On their shaven heads they wear a white embroidered skull cap, and over it a stiff dome-shaped cap of many colours, like those worn by the Moors of Ceylon. With the exception of the high caste gentlemen, who wear an article on their backs, half shirt half jacket in shape, made of some light cotton stuff, all the others are naked from their waist upwards. The wearing of a jacket by a low caste man is considered an impertinence, and indeed it was distinctly forbidden during the reign of the Rajas.

### CASTE DISTINCTIONS.

There are three castes generally recognised—Manikuwanus, Thakuruwanus, and Raveries. Besides the distinction in the dress, there is a distinguishing affix added to their names, by which the caste to which a man or woman belongs may be made out. Thus, Dhom Manikuwan and Asa Manika are the names of a gentleman and lady respectively of the aristocratic caste. The affixes for the second caste are Thakuruwan, or Thakura, masculine, and Bephanu, feminine: thus Musa Thakura and Amina Bephanu belong to the second caste. The males of the lowest or Raveri caste are called Kallus, and the women are allowed the affix Bebe or Be. Alli

Kallu and Caddha Be would therefore represent a man and woman of the lowest caste. This caste affix to names much represents the Singhalese style of nomenclature, where in such names as Kalu, Banda, Dingiri Manika, Tikiri Naide, and Raṇ Etena, the castes and often the callings of the persons so named may be recognised. Besides this caste affix there is the family name corresponding with the "gha nama" of the Singhalese. The houses of the upper ten have the high-sounding name of "Ganduwaru," corresponding with the Singhalese "Wallouwa," while all other houses are simply called "Gothē," or "Gha." Accordingly, the full name of a Manikuwan would be something like the following: "Bodu-ganduwarugā Musa Manikuwan;" while "Olithura-gothegā Ali Thakura" would represent the full name of a middle-class man.

### OCCUPATION.

The Raveries, as their name implies, are toddy drawers, and stand parallel in the social grade with the "Hakuros" of Ceylon. They are looked down upon by the upper and middle classes, and are not allowed to aspire to anything higher than the trade of their fathers, although rising high is an essential feature in it. The toddy is extracted from the flower of the cocoanut palm, and is converted into jaggery by the simple process of boiling it over a slow fire. None of the toddy is allowed to ferment, as the natives are all strict teetotalers, and condemn the use of intoxicants as sinful. To this cause may be mainly attributed the peaceable nature of the people.

The manufacture of jaggery is one of the chief industries of the island, and is carried on by the women and girls of the Raveri caste, while their men and boys employ themselves on the tree tops, cutting and trimming and tapping and binding the flowers from which the toddy is extracted.

The flower selected should be still enclosed in its spathe or flower sheath, and must be one that will not bloom or expand for at least four or five days more. It is at first tapped all over with a mallet or the handle of a knife, and then tightly bandaged from the base to within about two inches of the tip, with tape-like strips of the pandanus leaf, and the tip is then cut off, and the cut surface rubbed with lime and saffron, and adjusted over the cocoanut shell, which is suspended under it to receive the nectar or sweet flower juice which trickles down from the bruised flowerets. The toddy is gathered in twice a day, and a thin slice is taken off the end of the flower every morning, and the cut surface daubed over with saffron and lime as before. The object of the lime is doubtless to neutralise the acidity of the toddy, and thus prevent fermentation.

The Thakuruwanus, or middle class men, generally follow a seafaring life, some as fishers, others as sailors, and a few as mates of native vessels.

The Manikuwanus, or aristocratic caste, are either owners of vessels, captains, or traders.

There are several ship-builders and carpenters, and about three or four silversmiths; most of these are drafted from the middle class.

The silversmiths carry on a comparatively lucrative trade, considering the profusion of bangles worn by the women.

#### NATIVE VESSELS.

The natives build their own sailing vessels, called "gundras" or "hodies," in which they carry on a regular trade between this and the ports of India and Ceylon. They resemble a brig in shape and appearance, carry two masts, and are square-rigged. They are built in two sizes; the big ones, "boduhodi," are equal to a freight of about two hundred tons, and are intended for long voyages. The smaller ones, "banduhodi," with a carrying capacity for about fifty tons, are confined only to the trade between these islands and Ceylon.

The vessels leave every year between August and September, and return about April or May, shortly before the setting in of the S.W. monsoon, when they are hauled ashore for repairs.

#### COMMERCE.

Besides the island produce which the vessels take on their outward voyage, they carry a large number of islanders as passengers to the chief ports of India and Ceylon, where they seek employment in steamers and other vessels as lascars.

The chief exports are cocoanut, coir rope, Maldivian fish ("Kumbala Machche"), fish sauce ("Dhea Hakuru"), "Bonda Aluwa," jaggery, and cowries; and the chief imports, rice, salt, curry stuffs, wearing material, pots and pans, tea, sugar, tobacco and areka nuts.

#### "KUMBALA MACHCHE."

The Maldivian fish, or "Kumbala Machche," called "Umbala Kadda" in Singhalese, is prepared from the Bonito fish, which is found in abundance about these islands. They very readily take the bait, and are caught with the hook and line. They are of the size of an ordinary sear fish, and in colour and consistence of their muscular tissue they resemble the "Kalavala" of Ceylon. On being brought ashore they are immediately deprived of their heads, tails and internals, and the trunk being quartered, the pieces are thrown into a cauldron of boiling water to which a quantity of salt has been added. In this they are placed over the fire for about half an hour, and then taken out and spread on a sort of shelf made of sticks, and dried over embers till the next morning. They then undergo a process of sun drying for about eight or ten days, and are stored up for exportation.

#### "DHEA HAKURU."

The water in which the pieces of fish have been boiled, holding as it does in solution the blood and juices of the fish, is preserved over embers till the next day, when another quantity of fish is boiled

in it and removed, and the water treated in the same manner as before, till with daily additions to its consistency, and diminution by evaporation from its quantity, it assumes on about the seventh day the consistence of a syrup. To this syrup is added a quantity of bruised, smoke-dried "Kumbala Machche," and it is again placed over the fire and evaporated, till it becomes as thick as tar or treacle. This is the much-prized "dhea hakuru" of the natives. Care is taken to skim off regularly the fish oil which floats on the surface, as its presence would spoil the flavour of the sauce.

### "BONDA ALUWA."

The "Bonda Aluwa" is a hard, dry, sweetish conglomeration of cocoanut, coarse rice flour, and jaggery, in proportions known only to the islanders, shaped like a German sausage, and wrapped up in plantain leaves.

Fishing is a regular occupation with many of the men and boys. While the more adventurous push out into the open sea in their fishing boats, the others find enough to do in the lagoon with their lines and nets and spears and harpoons.

### BOATS.

The boats are built entirely of wood grown on the island, cocoanut timber predominating. None of them carry an outrigger. The fishing boats are larger than any of the kind used in Ceylon, and in calm weather are capable of making voyages between this and the Maldives, and even between this and the West of India. The bow of the boat is narrow and prominent, terminating in a gracefully carved beak; the stern has a little projecting deck, and the tiller is ornamented and shaped in the form of some fabulous bird. Rising from the centre of the deck, and close to the tiller, is a carved post with a notch at the top, for supporting the mast when it is not in use. The mast is made of cocoanut wood, and the main sail of cocoanut leaves

### COCOANUT LEAF SAILS.

The material invariably selected for the manufacture of the leaf sail is the tender leaf of the cocoanut, before the leaflets have properly expanded. This is first heated and steamed over a fire, which, by depriving it of a good deal of its moisture, renders it soft and pliant. It is then exposed to the sun and dew alternately for two days and two nights. The leaflets are now torn away from the midrib, and divided into strips, each about a third of an inch wide; these strips the women weave into a large mat, which, when complete, measures about twenty feet long and eight feet broad. The strips are woven as close together as possible, so as to render the sail air-tight; and, in order to help it to bear the strain of the wind, thin coir rope is stitched into it from top to bottom, and from side to side. It is further strengthened by bands of gunny,

about ten inches wide, sewn on to the margins. The lower half of the sail has several diamond shaped patches on it, to which are attached the strings for holding the folds of the sail, when it may be necessary to shorten it. These patches are generally cut out of the flower sheath (spathe) of the cocoanut. The sail is now complete, except that the distinguishing number has to be attached to it; this is generally cut out in blue cloth and sewn on to the middle of the upper half of it. The numbers are large, and can be seen at a great distance, and are evidently intended to help those on shore to prepare to meet their boats as they return after a day's fishing.

### BONITO FISHING.

While on the subject of fishing boats, a few words on Bonito fishing will be interesting. The fish are caught with the hook and line, both of which are manufactured on the island. Fine strong thread is made from the outer bark of a tree growing wild here, and this is the material used in the manufacture of the fishing lines as well as the nets. The hooks are made of iron and coated with lead; the object of this lead coating being to give the hook the colour of the little fish used as bait. The hook has a broad curve, and the second barb is dispensed with, so that there may be no delay in unhooking the fish. On approaching a shoal of fish, handfuls of the live bait are thrown out towards them, and they immediately follow the boat, which does not stand still, but continues sailing along; and the bait is doled out to them as long as they keep on following. At the same time ten or twelve men, armed with rods and lines, station themselves on the little after deck, and with a dexterity seemingly natural to them, they land the fish into the boat almost the very moment they take the hook.

In ordinary seasons a boat is supposed to bring in from two to three hundred fish a day; but when fish are plentiful a boat's crew is said to catch as many as a thousand a day. This certainly is not impossible, for the writer has seen about fifty fish landed into the boat within half an hour. The fish on being brought ashore, are divided between the owner of the boat and the boat's crew, which consists of from fifteen to twenty men and boys.

### THE VILLAGE.

The village of Minicoy is situated in the centre of the island, which is also the most elevated part. On approaching it from the lagoon, the first objects of interest seen are the large swinging cradles on the beach, on which the native gentlemen lounge in the evenings and enjoy the breeze.

Beyond these are rows of boat houses, where boats are built or repaired, and where the sails and other fishing gear are stowed away. From the beach, narrow roads and lanes lead into the village, and are intersected by others running at right angles to

them. On either side of the roads are coral-built walls or cocoanut leaf (cadjan) fences shutting in the houses and home enclosures from the public gaze. At intervals in these walls and fences are the gates leading into the home-enclosures, and these are kept constantly closed by means of "cadjan" doors hung on horizontal beams. On the side of the roads may also be seen large square tanks with terraces of steps leading into them from one of the sides; in these the men and boys have their daily ablutions; and in these, too, the frequenters of the mosques, which are close by, have their ceremonial washings before going in for prayers. The tanks set apart for the women are more secluded. In the heart of the village, too, and on the same ground as that on which the mosques stand, are the cemeteries. The graves are all marked with little tombstones, which are cut out from solid coral and beautifully engraved. Each grave has two stones, one at the head and one at the foot. Those for females are smaller and differently shaped from those for males, which latter are about three feet in height.

There are no aristocratic quarters in the village; the rich and poor live together. Indeed, the houses of the better classes seem to form so many nuclei, around which their poorer retainers settle.

#### HOME ENCLOSURES.

Each home enclosure contains two or more houses, the families occupying which are more or less related to each other. This is partly or wholly due to the fact of husbands having to marry into the families of their wives; where, as each young family increases, new quarters have to be provided for it within the same home enclosure. This domestic arrangement prevails in many of the up-country (kandian) villages of Ceylon, and is another proof of the affinity between the Singhalese and these islanders.

#### DWELLINGS.

The dwellings of the poor are in most cases nothing more than huts, built of cocoanut and jungle wood, and roofed and walled with the platted leaves of the cocoanut; but in these, as in the better class houses, the female apartments are distinct from those used by the males. The better class houses are built of small slabs of solid coral, and mortar made of coral, lime and sand. The doors and panels, which are elegantly carved, are made of wood imported from India and Ceylon. The roofs are covered with platted cocoanut leaves, and the floors, which are raised about a foot above the surface of the surrounding ground, are made of bits of coral and mortar pounded down. In some cases the floors are ornamented with cowries tastefully set in the mortar. Every house has a verandah, and a porch, called the "hundoligha," or swing-house. In the centre of this porch, suspended from the beam, is the "hundoli." This is a large swinging cradle, similar to those on the beach. On this the master of the house has his mid-day siesta.



On a side of the porch is a large raised platform or divan, built of coral and mortar, and covered with pretty Maldivian mats. Here visitors are entertained, and on it they sit, tailor fashion, and chew the aromatic but mouth discoloring compound of betel leaf, areka nut, lime, tobacco and cloves, which is as sure to be offered to them as are liquid but intoxicating compounds among nations boasting of a Western civilization. Here, too, they eat sweets, and sip tea or coffee, or else lounge comfortably and smoke the hookah.

Leading into the porch, or verandah, from the main building are two doors, the space between which is ornamented with carved wooden panels. They open from the male and female apartments respectively. The former, called "ghadaru," is used in common by all the males belonging to the family. A raised platform or two—"ari phai"—similar to the one in the porch, occupy nearly a third of the room; on these they arrange their boxes, hats, clothes, tomtoms, and other scanty furniture, and on these they take their meals by day and make their beds at night. The female apartment has wooden cots, "palanka," or hanging beds, each of which is completely veiled in with ornamental curtains, both for purposes of decency as well as for protection from mosquitoes. Most houses have a store room attached to the main building. Furniture is as a rule scanty, but some of the houses of the upper ten are not innocent of chairs, tables, couches, globe lamps, and so on.

The kitchen ("badegha") is, as a rule, detached from the house, and every home enclosure has a well sunk close to the kitchen; precautionary measures these against possible fires, learned, doubtless, from sad experience in the past. The wells are built square, of coral and mortar, and are not more than five or six feet deep; and the apparatus for drawing water is nothing more than a long stick with a large cocoanut shell fixed to the end of it. The water in the wells rises and falls with the tides, yet it is not as brackish as might be expected, considering the proximity of the wells to the sea, and the loose and porous nature of the soil.

### GARDENS.

Behind the village, and separated from the beach by mounds of soil twenty or thirty feet high, are the gardens of the well-to-do people. They occupy the site of what were paddy-fields during the Buddhist or anti-Mohammedan period. The soil is damp, and rich in vegetable matter, and well suited to the growth of the plants and trees cultivated on it; of these the plantain, areka nut palm, betel creeper, lime, mango, sugar cane, and brinjal are the most common.

### LEPER VILLAGE.

About three miles to the east of the village is a group of huts called the Leper Village; here the poor mortals suffering from that terrible disease have to spend the remaining days of their lives, the Mohammedan, like the Jewish law, demanding complete segregation of those thus afflicted.

## KACHCHERI.

On the west side of the village and about half a mile from it, is the Kachcheri or Government House. This is where the Amin holds court, collects port dues and taxes, stores the government share of the island produce, registers births and deaths, unites young couples in the bands of matrimony, and breaks the bands of older ones who have grown tired of each other; in short, this is where he performs all the multifarious duties connected with his important office. Speaking of births and deaths reminds us of two important village worthies we failed to notice earlier; these are, to follow the natural order of things, the midwife, "ādorū datha," and the doctor, "bas wariā." Considering the crowds of little boys and girls one meets with in the village, and more than this the unequalled proportions of the midwife's outer self, it must be evident that she has the largest practice of the two. As among the Singhalese "wederāles," medical books and the study of medicine descend from father to son. But our doctor has gone beyond this, and has not only a son, but a wife, too, who has a knowledge of the healing art. Both father and son have recently left the island in search of "pastures new." The young doctor has given up dealing in herbs and pill boxes, and hopes to box the compass in future in the capacity of a "malim" or mate.

## HEALTH AND DISEASE.

The fact of the two doctors having left the island is no proof, however, that the people are blessed with good health; the island being malarious, fever is very prevalent, especially after the rains. Both adults and children suffer from intestinal worms; this being evidently due to the large proportion of jaggery and insufficient quantity of salt that enters into their diet. Skin diseases are very common. Many, especially middle aged women and old men, suffer from a chronic inflammation of the eyes; this is supposed to be due to the intense glare that rises from the white coral sand. Small-pox has been imported to the island very often; it found its way here in 1884 in one of the "gundras," and carried off eight souls, only five recovering from the number that took the disease. Chest diseases are comparatively rare.

Between the kachcheri and the village is the shipbuilding yard. The gundras are hauled up here at the setting in of the S.W. monsoon, and are placed under large sheds for repairs.

## THE LIGHTHOUSE.

About two and a half miles to the east of the kachcheri stands the lighthouse. The works in connection with this building were commenced in November, 1882, by Mr. Thomas Edmond, assisted by Mr. John Woodcock and three European foremen, under the

direction, in England, of Sir James Douglass, Engineer-in-Chief to the Trinity Corporation. The first few months being spent in necessary preliminaries, the foundation was laid in May of the year 1883, the ceremony of laying the first stone being performed by Miss Howah Bephanu, the youngest daughter of the Amin.

Masons and other skilled labourers were had from Galle, many of them having been employed in the erection of the Basses lighthouses. The islanders were employed largely for ordinary labour, and though the work was foreign to them at first, they proved themselves efficient in a very short time. The building progressed rapidly, and in March, 1884, the tower was so far completed as to be ready to receive the lantern, for the fitting up of which a skilled mechanic was sent from London.

The works were fast approaching completion, and the staff of officers were beginning to congratulate themselves that they kept their health so well and escaped the dangers of the malaria, for which these islands are so notorious. But our jubilations were premature. Mr. Woodcock, the Assistant Superintendent, while supervising the excavations for the out-buildings, took the fever and had to go to Ceylon for a change. He was expected back in a month's time, restored to health and invigorated by the fresh mountain air of Kandy. But our expectations were not realized; he succumbed to the ravages of the disease while under treatment in the Colombo Hospital, and a stone monument in the general cemetery of that city marks the spot where his remains lie. He was a God-fearing man, a loving husband and father, and a faithful servant to his employers. While rejoicing in the hope that his end was peace, our sympathies are with the sorrowing family he leaves behind; and we could hardly close these lines without an expression of humble gratitude to Almighty God for the merciful protection granted to us during our stay here. Though the dangers incidental to these works have not been few, we have been brought safely through them all.

The lighthouse was completed at the end of 1884, and the light exhibited therefrom, in the presence of Sir James Douglass (who had come out from England to finally inspect the works) and the Amin of the island, on the night of the 2nd February, 1885. The top of the tower, which is built of black bricks, and the lantern, are visible by day above the trees. On the bearing of N.E.  $\frac{1}{2}$  N. from the lighthouse the light is obscured by cocoanut trees within a distance of about 8 miles. This obstruction extends in an easterly direction for 74 degrees to the bearing of E.S.E., where the distance obscured decreases to about  $1\frac{1}{2}$  mile. The light is white, revolving every half-minute, showing all round the horizon at an elevation of 150 feet above high water, and visible in clear weather at a distance of about 19 miles.

*To the.*

# Malays of Ceylon

THIS RECORD

OF

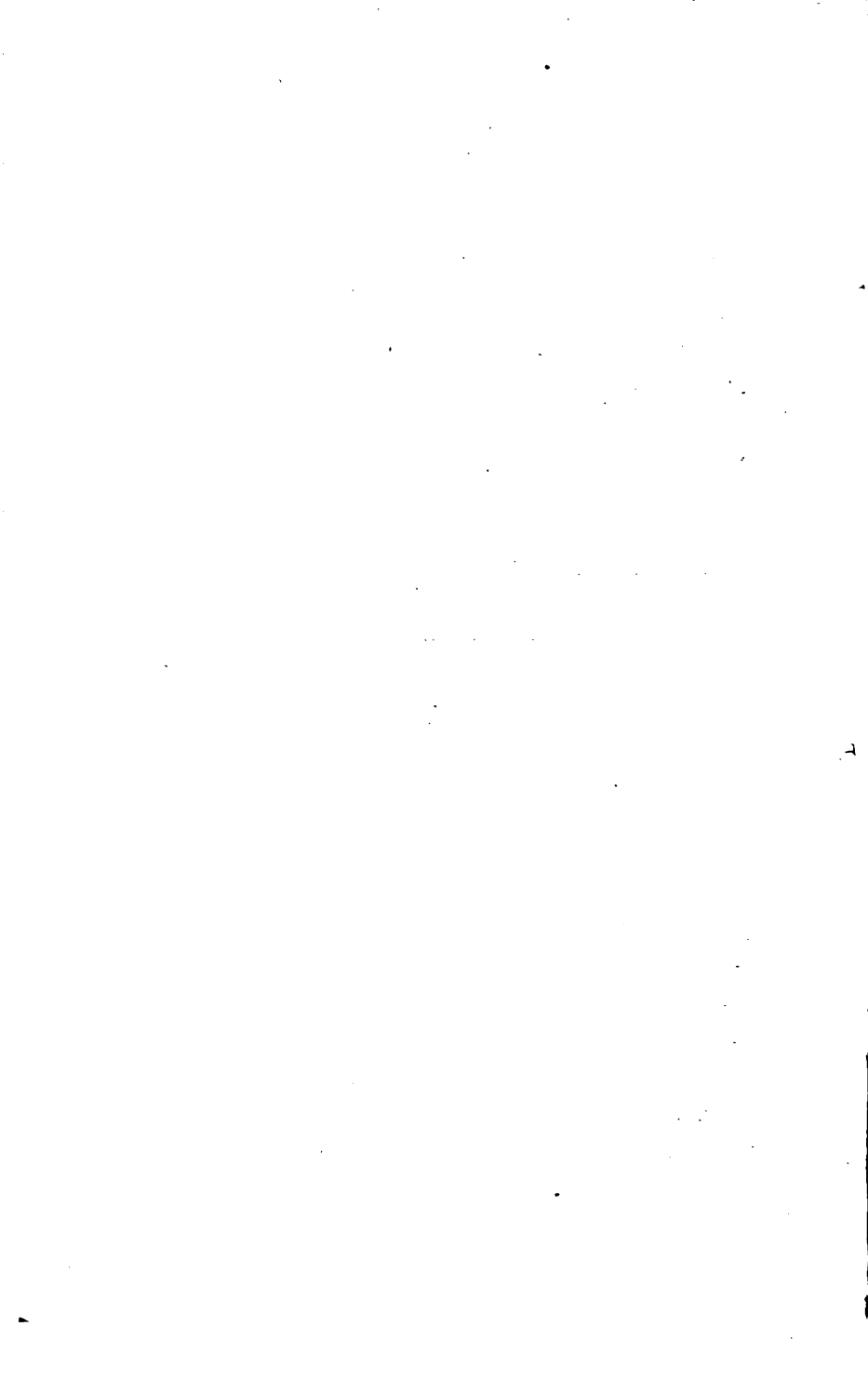
THEIR HISTORY, MANNERS, CUSTOMS AND RELIGION

IS AFFECTIONATELY DEDICATED

BY

A. T. SHAMSEDEEN.

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## P R E F A C E.

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THE Island of Ceylon holds a population of 2,758,529 persons, the bulk of whom are the natives of the place, scattered all over the Island ; but especially in the maritime provinces, another race is to be met with, differing essentially from the rest of the inhabitants. The members composing this race are known as Malays and are the descendants of the ancient princes and their attendants who were sent here on the conquest of their country by the Dutch.

Various publications have from time to time appeared regarding the situation and extent of this Island, its climate and resources, and the character and condition of its inhabitants; but none of them contains any particular account of the Malays; and even where it has been noticed it is invariably mixed with other matters, and, dispersed through so many pages, it is not adapted for purposes of reference.

It is, therefore, proposed to give in this publication a short account of their origin, manners, customs and religion, but the fulfilment of such task is very tedious, as there are no authentic records extant respecting the origin of this race ; and what has been offered on the subject by European writers appears to have its foundation in nothing but vague, and often distorted.

Before I conclude my prefatory remarks, I feel it necessary to entreat the reader to bear in mind that the present work is the production of a native of this Island, in whose writing any faults in composition, particularly as regards his English, a knowledge of which language he possesses very imperfectly may be pardoned, as arising from the circumstances of his birth and position; the want of an idiomatic knowledge of the language in which he writes, may have deprived his pages of all grace of style. He is conscious however, that he has most rigidly adhered to truth, and should he have succeeded in rendering his narrative, clear and intelligible, the object with which he set <sup>out</sup> will have been fully accomplished.

A. T. S.

*Colombo,*

*Maradana, 11 April, 1884.*

THE  
*Malays of Ceylon.*

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A RACE known by the name of Malays,\* forms a considerable proportion of the inhabitants of Ceylon. Their original country lies in the peninsula of Malacca, and other adjacent islands in the Indian Archipelago. It is difficult to determine the date of their first introduction into Ceylon ; but it has for many years been customary for the Dutch to bring them to this Island and their other settlements in Asia and Africa, for the purpose of carrying on various branches of trade and manufactures, and also to employ them as soldiers and servants. The tradition current among the Malays themselves is that they all descend from some princes and their attendants, who were sent by the Dutch Government, for political reasons, from Batavia to Ceylon. On their arrival in this Island, many of them entered into the Kandyan Service, and others were retained by the Dutch.

According to Mr. Kampfer, the Malays in former times had by far the greatest trade in the Indies, and frequented, with their vessels, not only all the coasts of Asia, but even ventured to the shores of Africa, and particularly to the great island of Madagascar, "for,"

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\* From *Mala*, to bring, and *aya*, wood, as they were once employed as woodcutters to the fleet.—*Vide* "Travels in South-Eastern Asia," Vol. II., p. 115.



adds this author, "John de Barros in his 'Decades,' and Flaccourt in his 'History of Madagascar,' assures us, that the language spoken by the inhabitants of that large African Island is full of Jáván and Malayan words ; subsisting proofs of the commerce which these two nations, about two thousand years ago the richest and most powerful of Asia, had carried on with Madagascar, where they had settled in great numbers."\* In the occupation, however, of the island of Madagascar, and probably of certain ports—though this is not so clear—the Arabs were forestalled by the Malays; and for this information we are indebted to the researches of Dr. Pickering, amongst others. This gentleman says, in his "Races of Man," that the Malayan race is actually present upon the island of Madagascar, and dominant there; and as to the time of their arrival, it is sufficiently evident that Malay influence has preceded the visits of the Arabs.

In the etymology of the island itself, says Dr. Vincent, we should rather make our researches in the Malay than in any other language. The Arabs called it the Island of the Moon; but it was first known to them as *Madaster* or *Magaster*, and it was this name that was the first brought into Europe by Marco Polo, who doubtless had it from the Arabs. *Ma* or *maha*, and *daster*, are both Malayan words; but the former would more likely have its origin in the Sanskrit, and the latter in the Persian language. These words

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\* "History of Jáva," Vol. I., p. 212.

might, however, be readily imported into the Malayan tongue from an almost simultaneous intercourse with India and Persia, which is subsequently confirmed by the visits of the Malays to India and the Persian gulf, for purposes of trade, in conjunction with the Arabs. The Persians themselves were not a maritime people, neither were the inhabitants of India, as compared with the Malays, while the Arabs themselves would scarcely have borrowed a name from another tongue.

In further testimony, however, of the early migration of the Malayan race westward, we have undeniable proof of their adventurous journeys by sea; for, unlike many other Eastern nations, they had no religious or other obstacle to prevent their crossing the ocean; the voyages to and fro being made, as suggested, remarkably easy by the regularity of the monsoons. If, then, we recognize this conclusion—one which seems almost forced upon us—it stands to reason that with the Malay came the merchandize of his own land, which, in due course fell into the hands of the Arabs, and was by them carried into Arabia, Judea, and parts of Egypt.\*

It will be seen in the Sinhalese annals that in the 11th year of the reign of Pandita Prákkrama Báhu III. the island was invaded by a large Malay force, under a leader named Chandia Baun,† and a warm engagement followed, in which the Malays suffered so severe

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\* *Vide* "Perak and the Malays," pp. 324–326.

† Marco Polo, who visited Ceylon in the same period, thinks this leader to be the same as Sindeman.

a defeat that the native historian compares it to "a wood of reeds crushed and uprooted by the hurricane."

The Malays are bold, warlike, and prepared for the most desperate enterprizes;\* they hear the commands of their superiors with most profound reverence and yield implicit obedience to their most rigorous orders. They are generally courteous, dignified, and hospitable; many of them have a tolerably good idea of the manners and customs of Europeans. They are most sensitive, innately polite, and gentle in manners, and very quick to understand and appreciate any little courtesies or civilities one may offer them.†

The Dutch Government of Ceylon had always a regiment of Malays in their service; a large proportion of the officers consisted of their own princes. That corps for a considerable time past seemed to form the strength of their garrisons, and were the only troops which either kept up discipline or displayed any sort of bravery in the field; and it will be seen in history that it was from them alone the British troops met with much opposition when they took charge of Colombo and Trincomalee. At the same time it must not be imagined that the Malays are the blood-thirsty savages, they were some time back made out to be. The

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\* During the rebellion in 1848, two dozen of the Ceylon rifles at Kurunegala put to flight 4,000 Sinhalese rebels.—*Vide* "A Lecture on Ceylon" by Alex. Brown.

† In capacity the Malays are probably not inferior to any of the nations of Europe. *Vide* "History of Sarawak," by Hugh Low, Colonial Secretary at Labuh-an.

running "ámuk," so often cited as an instance of their savage blood-thirsty nature, is really a very rare occurrence among the tribe here. Moreover, they are not addicted to the vice of gambling which, amongst the natives of Celebes and the Malays of the Peninsula of Sumatra, is carried to so great an extent. Their aversion for the English at first had inspired by the ungenerous policy of the Dutch, who endeavoured to secure their colonies by cherishing among the natives an implacable detestation of the other European nations, and in particular by representing the English as a nation of cruel and inhuman tyrants, who carried destruction and oppression wherever they went. The cowardly and base conduct of the Dutch, however, both in yielding without resistance to British troops, and in abandoning the Malays who fought their battles to their fate, had completely alienated the Malays from their former masters. They subsequently looked upon the Dutch with contempt, and called to mind their former tyrannical behaviour; while the brave and open conduct of the English had gone far to do away their former prejudices against the latter. But they have since proved loyal to the British Government, and behaved universally with great respect and obedience to their European officers.\*

Several Companies of Malays, after the acquisition of the Island by the English, accepted services under the East India Company, and in 1801, when transferred to the

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\* *Vide* "Percival's History of Ceylon," p. 161.

Imperial Government, designated it "The First Ceylon Regiment" which was equipped and clothed as Infantry of the Line, and it consisted entirely of Malays. In 1814 the Prince Regent was pleased to confer on it the title of "Light Infantry." In 1820 it was converted into a Rifle corps, and in 1827 named the "Ceylon Rifle Regiment." In 1815 the Regiment was engaged in the capture of the Kandyan Provinces, and behaved in a most soldier-like and exemplary manner, which, in the opinion of the then Lieutenant-Governor, reflected the greatest credit on the corps, and called forth his warmest acknowledgment.

During the rebellion of 1817-1818 the regiment brought itself prominently into notice by its gallantry, good conduct, loyalty, and endurance of fatigue and approbation.

During the insurrection in the interior of the Island, in 1848, the regiment behaved, as it always had done, performing every duty with zeal and energy.

In 1873 Her Majesty the Queen had been pleased to order the disbandment of this excellent Regiment.\*

Many of the Malays are at present employed in Government Offices and Mercantile Firms, all of whom are esteemed men of strict probity. Some are in the Police Force, while a few follow various industries; and others of the more wealthy are general merchants.

The Malays are of a middling stature, remarkably

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\* *Vide* "General Order" of 9th June, 1873.

well-proportioned, and of a strong and muscular make. They are of a light-brown or yellowish color, which approaches nearer to a copper hue in their old age, or when they are much exposed to the sun. Their forehead is broad and flat; their eyes small, black, and very deep-sunk; their nose flattish, and broad towards the nostrils. The Malays are, at present, mostly mixed with the natives of their own faith—consequently they differ in colour and features than are natural to a Malay. Their hair is long, coarse, and black, and always moistened with cocoanut oil, &c. By some it is twisted up into a knot, which they fasten on the back of the head, while others cut it short;\* their beards are scanty with the exception of a few; their legs and arms are particularly well-shaped, and very slender at the wrists and ankles. An ill-shaped leg is scarcely ever to be seen among them. The average height is about six feet. They are extremely formal and regular in their social manners. Several of their usages are the same as those observed by the other Muslims. But in their mode of salutation they differ somewhat from the rest of their co-religionists. When a Malay man meets his friend he greets him with the salutation of "Peace be on you,"† with both hands raised to the forehead. This action is called "Sumbáh," and it is also observed before the performance of any action which takes place before an assembly of

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\* This practice has been widely resorted to for some time back.

† Assalámu-alaikum, or Salám-alaikum.

people, but in the latter case, without the "Salám." \*

The language of the Malays is soft and pleasing in sound—the "Italian of the East"—and very expressive. The *Malay* language, which is original in the peninsula of *Malayo*, and has from thence extended itself throughout the Eastern islands, so as to become the *lingua franca* of that part of the globe, is spoken every where along the coasts of Sumatra, prevails in the inland country of *Menangcabow* and its immediate dependencies, and is understood in almost every part of the island.

The purest, or most esteemed Malay is said, and with great appearance of reason, to be spoken at Malacca. It differs from the dialect used in Sumatra chiefly in this respect, that words, in the latter, made to terminate in *o*, are, in the former, sounded as ending in *a*. Thus they pronounce *lada* (pepper) instead of *lado*. Those words which end with a *k* in writing are, in Sumatra, always softened in speaking, by omitting it; as "*tabbe bunnia*," "many compliments," "for *tabbek, bunnia*:" but the Malaccans, and especially the more Eastern people, who speak very broad, give them generally the full sound. The personal pronouns also differ materially in the respective countries.

Like English, Malay seems to be a conventional blending of several other languages—Arabic, Sanskrit,

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\* This is an ancient custom, which they find it difficult to relinquish, though they can give no reason for perpetuating it with such ceremonies.

and the languages of those islanders with whom the Malays were first thrown into contact. At the present day many English and Portuguese words find their way into it, but little disguised by pronunciation. In this language there is no change made in words to express number, person, gender, mood, and time; and the same word is often used as a noun, adjective, verb, and adverb. Even the tenses to Verbs are seldom varied. Hence, so much as is necessary for common purposes is soon learned. But, whoever would speak on literary or religious subjects, finds great difficulties. The absence of grammatical inflections and particles creates great ambiguity, and makes the meaning so dependent on the juxtaposition of words, as to make great skill necessary to propriety in discoursing on any critical or novel subject. Besides this, the language is so poor in abstract terms, as to make it impossible to avoid using a host of new words. These are adopted by one from the English, another from the Arabic, another from the Greek, and another from the Portuguese, according to the learning or fancy of his teacher.\* Mr. Walter Hamilton, in his *East India Gazetteer*, states that, after repeated trials, one hundred words in a Malayan book were found, on an average, to contain twenty-seven primitive Malayan, fifty Polynesian, sixteen Sanskrit, and seven Arabic; leaving thus only one quarter of the words proper Malayan. Mr. Marsden

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\* *Vide* Malcom's "Travels in South-Eastern Asia," Vol. II., p. 127.



the famous writer of the Malayan language, says, in his History of Sumatra :—

“Attempts have been made to compose a grammar\* of the Malayan tongue, upon the principles on which those of the European languages are formed. But the absurdity of such productions is obvious. Where there is no inflection of either nouns or verbs, there can be no cases, declensions, moods, or conjugations. All this is performed by the addition of certain words expressive of a determinate meaning, which should not be considered as mere auxiliaries, or as particles subservient to other words. Thus, in the instance of *rímá*, ‘a house’; *dari pádá rímá* signifies ‘from a house’; but it would be talking without use or meaning, to say that *dari pádá* is the sign of the ablative case of that noun, for then every preposition should equally require an appropriate case, and as well as ‘of,’ ‘to,’ and ‘from,’ we should have a case for *di-attas rímá*, ‘on top of the house.’ So of verbs *calu sáyá bólé jálán* ‘if I could walk’: this may be termed the preter-imperfect tense of the subjunctive or potential mood of the verb *jálán*; whereas it is in fact a sentence, of which *jálán*, *bólé*, &c., are constituent words. It is improper, I say, to talk of the case of a noun, which does not change its termination, or the mood of a verb,

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\* Since this work was prepared for the press, I have seen the grammar of this gentleman, and a vocabulary prepared by Mr. Swettenham of the Straits Settlements.

which does not alter its form. A useful set of observations might be collected, for speaking the language with correctness and propriety; but they must be as different from the artificial and technical rules of our grammarians, as the dress of an European lady from the simplicity of a Malayan habit."

The Malayan literature consists chiefly of transcripts and versions of the Kurán, commentaries on the Muhammadan Law, and historic tales in prose and verse.\* Many of these are original compositions, and others translations of the popular tales current in Arabia,

\* The names of their popular works run as follows :—

1 <i>Asál agáma Islám</i> , or, 'the principles of the Islám faith'	18 Kitabu'l Allah [shefi	Patúrunan segála Rájá
2 <i>Idlal agáma Islám</i> , or, 'explanation of the Islámic worship'	19 Sijihul Huseinúl Ka-	38 Hikáyat Ambon
3 <i>Idlalu'l fikh</i> , or, 'ex- planation of the law of Islám'	20 Samar adainúl Islám	39 Do. Achi
4 <i>Mangkóta Segála Rájá</i>	21 Mirátául Múminín	40 Do. Báyan
5 <i>Fasíru'l Kurán</i>	22 Márifatúl Islám, or, Pungánal agáma Is- lám	41 Do. Baktiyan
6 <i>Hafid Imámúl Mú- minín</i>	23 Permáta Márifat Allah	42 Do. Tana-Hítam
7 <i>Hikáyat Miaráj Nabi- Muhammad</i>	24 Reazu'l-lehafi	43 Do. Jowhará Mánikam [janga
8 <i>Hikáyat Nabi-Mu- hammad</i>	25 Ruein- parungan	44 Hikáyat Datá Per-
9 <i>Hikáyat Nabi-Músá</i>	26 Núr-Muhammad	45 Do. Déwa Rájá
10 Do. Nabi-Yúsúf	27 Charitra daripáda Sulaiman [al-Omar	46 Do. Rájá Boman dan Lukman [bája
11 Do. daripáda Kajadiyan Muham- mad	28 Charitra daripáda	47 Hikáyat Rájá Tambik-
12 <i>Hukum Islám</i>	29 Charitra Rájá Déwa Ahmad [Indra	48 Do. Rájá Sulí- man
13 <i>Hukum Haj</i>	30 Charitra Kobat Leila	49 Hikáyat Rájau'l Ajam-o-Azbah [pan
14 <i>Hukum Kanún</i>	31 Humzah Penchúri	50 Hikáyat Rájá Kuri-
15 <i>Ilmu Fikh</i>	32 Hikáyat Segála Susú- nan	51 Do. Rájá Kam- báyá
16 <i>Ilmu Falak</i>	33 Hikáyat Misa Túmum Panjiwila Kasúma	52 Hikáyat Rájá Níla Dáto Kawájí
17 <i>Kitabu'l Faíd</i>	34 Hikáyat Misa Gomu- tar	53 Hikáyat Bungá Ráti
	35 Hikáyat Jaru Kolina	54 Do. Asma-yatim
	36 Do. Chahaju Lan- gnáru	55 Do. Abdullha ibn Oumar
	37 Sihsilatu'l Salátiau, or,	

Persia, India, and the neighbouring Island of Jáva. There are also many compositions of a historical nature, such as the "Hikáyat Rájá-bangsu," which I have not seen, but which has been described to me as a genealogical history of the Malayan Rájás. The "Hikáyat Malacca," which relates the founding of that city by a Javanese adventurer, the arrival of the Portuguese and the combats of the Malays with Albuquerque, and the other Portuguese commanders. Since the introduction of Muhammadanism they have various Arabic narratives accommodated, however, to the peculiarity of the Malayan manners and customs:—"The Hikáyat Amír Humzá;" "the Hikáyat Rájá Kheiber;" the chief of the Jewish tribe of Kheiber in Arabia; "the Hikáyat Rájá Hinduk;" "the Hikáyat Muhammad Hanifáh;" "the Hikáyat Khadijá Maimún;" "the Hikáyat Edris;" "the Hikáyat Rájá Shah Murdán;" "the Hikáyat Sultán Ibráhim-ibn-Adham;" "the Hikáyat Sekandar Dulkarnein."

The judicial customs or traditions of the Malays have likewise been collected into codes of different antiquity and authority. Among those of the greatest authority are the *Undang-undang*, and the "Addat" Maláyu." The most ancient of these regulations, however, appear to have been adopted from the Javanese and Bugis. Particular states have at different periods composed peculiar regulations as the *Addat Kiddeh*, which were compiled by Rájá SHAH ALUM, in A. H. 1,151.

No dramatic compositions, in the Malayan language, have fallen as yet into my hands, though many of them are said to exist. Scenic exhibitions termed *Wáyang - wáyang* were, till lately, very common in the Malayan peninsula, but are now represented as less frequently exhibited. The subjects of the Malayan dramas are the same as those of their histories and romances, from which, like the dramatic compositions of the Siamese and Chinese, they only differ in assuming the form of dialogue and soliloquy, the progress of the incidents being generally the same.

The following specimens of the Malayan *Pantun*\* and *Sayer*† will exhibit the measure of the verse and the style of the composition. The first *Pantun* is a challenge to engage in a poetical contest. The rest exhibit the peculiar images introduced, and the manner of presenting them in the *Pantun*,—

Tuan búlu, sáyá tumíyang

Marilah kita berkilar táji

Tuan sapúlu, sáyá sumbilan

Marilah kita bersindir nyani.

You are a bamboo and I am but a slender twig ;

Yet come on, let us sharpen our weapons :

You are as ten, and I am only nine;

Yet come, let us contend in ironical verse.

\* *Pantun*, a word which is generally applied to a song, but which perhaps might with more propriety be rendered a proverbial sonnet, and it consists of four lines.

† *Sayer* is a moral poem resembling the Persian *Musnevi*, and is generally written in prose, but frequently intermixed with verse.

Buah dilama ber pangsú pangsú  
 Sámajúga bijinya mérah  
 Jángan tuan berpílih bangsá  
 Sámajúga dáranya mérah.

The pomegranate has many partitions,  
 But the seed is equally red in them all:  
 Do not give an undue preference to a race of men,  
 For the blood is equally red in them all.

Boah mamplum dári *Patani*  
 Másá sabíji di kulum rúsa  
 Tuan Islám sáya Nasráni  
 Sáma sáma manangung dúsa.

Of all the Mangoes of *Patani*  
 A ripe one is but a mouthful to a stag :  
 You are a Muslím and I am a Christian,  
 But we must equally bear our own faults.

Bátang pádi jangan di rúrut  
 Kalu di rúrut rúsak batangnya  
 Hátí mudáah jangan di túrut  
 Kálu di túrut rúsak badnya.

Shake not the rice stalk,  
 If you shake it the stalk is ruined:  
 Do not yield to youthful inclinations,  
 If you yield your person is ruined.

Siri kúning dari *Patani*  
 Pinang mudáah dari *Maláka*  
 Púti h kúning anak Nasráni  
 I'tu mámbáwa bádan chiléka.

The yellow betel leaf of *Patani*,  
 The fresh betel-nut of *Malacca*,  
 A white yellow Christian damsel,  
 Bring a person to total ruin.

The following passage of the Selambari is given as a specimen of the *Sayer* verse, in which the Malayan romances and moral poems are generally composed. In both measure and style they exhibit considerable resemblance to the ancient English and French romances; there is little variety of pause or accent, and the line consists indifferently of eight or nine syllables, one long syllable being reckoned equivalent to two short.

Tatkála tuan lankah di nátang  
 Máta mamandang sepárti bintang  
 Chahiyánya limpah gílang gumílang  
 Tiádálah a'bnng adápat mamandang  
 Pípinya bagey padi lalang  
 Barsambut dangan lehernya jinjang  
 Páras separti gumbur dan wáyang  
 Bárang di mákan barbáyang báyang  
 Dáhlinya bagé sáhári búlan  
 Kinningnya bintáh bagé ditillang  
 Lálu di ambel jádikan túlan  
 Mamáki chinchin permata *Sétan*  
 Changgeynya panjang ber kilat kilat  
 Separti mutiara suda tarícat  
 Pinggangnya ramping terlálu chantik  
 Leher laksana gambar dilarik  
 Mungluarkan káta yang pátáh chiridik  
 Bibirnya bagé patah chicharik  
 Teada mamáki láku ber sája  
 Gíginya ítam bukkus ber baja  
 Chartik moílik gilang de Rája  
 Bersunting kutum bunga Serája.  
 Párasnya elok búkam kapálang  
 Intahkan jiwa garángen hilang  
 Kapada máta súdah terpandang  
 Teadálah dápat kumbáli pulang.

When my mistress looks forth from her window,  
 Her eye sparkling like a star,  
 Its brilliant rays glancing and glittering  
 Her elder brother cannot support its lustre ;  
 Like the red mango is the hue of her cheek.  
 Becoming her tapering neck,  
 Traversed with shadows whenever she swallows:  
 Her features like those of a statue or scenic figure,  
 Her forehead like the new moon in its first day,  
 Her eye-brows curved, so fair I could devour her,  
 Long has she been chosen to be my mistress.  
 Wear a ring set with gems of *Ceylon*,  
 Her long nails shining like lightning,  
 Transparent as a string of pearls,  
 Her waist slender and extremely elegant,  
 Her neck turned like a polished statue,  
 Eloquent in the enunciation of her words,  
 Her parting lips like the crimson red wood  
 Not by dress, but by herself adorned ;  
 Black are her teeth stained with *bāja*\* powder,  
 Graceful, slender, appearing like a queen,  
 Her locks adorned with the *Serāja*† flowers,  
 Her features beautiful with no defect of symmetry,  
 My soul is often fluttering ready to depart,  
 Glancing eagerly forth from my eyes,  
 And quite unable to return to its station.

The character generally used by the Malays, is a  
 modification of the *Arabic*; and, in addition to the

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\* *Bāja*, a metallic or perhaps an antimonial preparation for giving a black colour to the teeth, together with an ointment prepared with empyreumatic substance which is chiefly used in Sumatra, but in Ceylon another kind of preparation is used commonly called Sippat-gigy.

† *Serāja* is an aquatic flower, *i. e.*, lotus or lilies, but in Ceylon the flowers generally used are roses, jessamine, and Japan flower.

proper Arabic alphabet they use six letters, of which one is the Persic *che*, the other a slurred *dál* of the Hindústáni, two more corresponds in power to the Persic and Hindústáni *pa* and *ga* but are written in different forms. Of the remaining two, *nga* and *nya*, are peculiar in forms, but correspond to the nasals of the first and second series of the Déva Nágari alphabet. The Malays of Jáva, however, often use the Javanese character to express their own language, as those of Celebes do the Bugis. In the Moluccas the Latin character has obtained some degree of currency even among the Malays, and is sometimes used by them to express the Malayan language.

That the Malays before the introduction of Arabic writing possessed an alphabetic character of their own can scarcely be doubted, although we are now ignorant, what that character was; for, whilst so many tribes similiary circumstanced, in Sumatra, Java, Celebes, and other islands, have retained even to this day their proper alphabets (all exhibiting traces of a Déva Nágari origin), it is not probable that this race alone should have been entirely unlettered; and we should rather conclude that, from the period of their conversion they were taught to regard with contempt, not only their habits of idolatry, but their ancient literature also.

That the course of the Malayan writing, conformably to the known practice of the Hebrews, Syrians and Arabians, is from the right hand towards the left, in opposition to that of most of the people of the Malayan



Peninsula, particularly of the unconverted natives of the interior of Sumatra and Jáva, whose alphabets, grounded on the principles of the Sanskrit or Déva Nágarí, proceed like the European from left to right.

With respect to the religion possessed by the ancestors of this race prior to their conversion to Muhammadanism little is known ; but it was probably some modification of the Hindú religion, much corrupted and blended with the antecedent idolatry of the country where they originated. The modern Malays are of the Sunni \* Muhammadans belonging to the sect of Sháfi,† and are the very strict followers of the religion of Islám, ‡ and whether they have performed the pilgrimage to Mecca or not, many keep regularly the fast of Ramazán, § but they mix up their religion

\* The orthodox Muhammadans are so called because they believe the traditions. "Sunnot," Q. V. they revere equally the four Khalifás or Successors of the Prophet, viz.: Abu-bakker, Omar, Uthúmán and Ali, ( the first two being the prophet's fathers-in-law, and the other two his sons-in-law.)

† One of the four orthodox sects of Muslims. The founder of this sect is Mohammad-ibn-Edris Al-Shafi, who lived in the eighth century of the Christian era. He was the first and most able of the Muhammadan doctors who wrote on the civil and canonical law. His tenets and opinions are in conformity with those of Abu-Hanifa, who died in the year of Hegira 150. (A. D. 782) Al-Shafi was born in the same year at Palestine, and died in Egypt at the age of fifty-four A. H. 204. (A. D. 836.)

‡ The proper name of the Muhammadan religion, which signifies the *resigning* or *devoting* oneself to God and his service.

§ The word *Ramazán* comes from *ramad*, *burning*; the month being so called from the solar year of the ancient Arabs, which occurred at the time of the greatest heat.

with traditionary customs and superstitions.

The dates of their conversion to the present religion are variously given, but Mr. Crawford who is perhaps the best authority fixes the year answering to A. D. 1,205, and puts the conversion of Achenese at 1,206, the Malacca Malays at 1,276, and the Javanese at 1,478, while the general conversion of the people of Celebes did not take place till the arrival of the Portuguese in their midst or about 1,510.\*

It is uncertain at what period the people of Menangcabow embraced the doctrine of the Prophet, although the religion is said to have been preached at Sumatra as early as the twelfth century.

About A. D. 1,160, a colony issued from the interior of Sumatra and established themselves at Singapore, where a line of Hindú princes continued to reign until 1,276. Whatever may in more remote times have been the nature of the intercourse between foreign nations and Menangcabow itself we know that Singapore, during the period noticed, was an extensively maritime and commercial state, and, at the time when the Portuguese settled at Malacca, embraced the largest portion of the commerce between the Bay of Bengal and the Chinese Sea.

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\* Some writers have formed a wrong conception by ascribing the triumphs of our Holy Prophet almost wholly to his arms. But, here the *sword* has not made way for his doctrine. Meanwhile Christianity sends forth her teachers, the Muslim without support insinuates his faith, and idolaters turn in tribes.

It is related in the Hadeed \* that the Prophet said to his companions:— “ In the latter times men shall hear of an island named Sumadara †; as soon as this shall happen, go and convert it to Islámism, for the island shall produce Vóliallás or persons of gifted piety, but there is a Rája of the land of Matabar whom you must carry along with you.” It so happened a long time after the time of the Prophet, that tidings were heard of the land in question at Mecca with names of other countries. The Sheriff of Mecca sent a vessel properly fitted out, with instructions to proceed to the land of Matabar, and its Nakhúda ‡ was Sheikh Ismáíl. When they reached the land of Matabar where they found a Rája reigning, named Sultan Muhammad, who enquired whence they had come and whither they were going, they informed him of their intention of going to the land of Sumadara, by the order of the Prophet Muhammad (on whom be peace.) The Rája was a descendant of Abubakker, and when he was informed of their intention, he appointed his eldest son to the Government of the land of Matabar and embark-

\* Properly a saying, but generally applied to the sayings which tradition has attributed to Muhammad (on whom be peace.) These are divided into two classes, the first is called “ *Hādeedul-Nabi*, ” or the sayings of the Prophet; the other “ *Hadeedul-Kuddoos*, ” or the Holy Sayings, which the Musalims believe the Angel Gabriel brought from Heaven.

† The name is certainly Sumatra, being compounded of *Semut*, an ant, and *Raya*, which in the Achi-dialect signifies great.

‡ *Nakhoda*, from *Nuo*, vessel, and *Khoda*, God; the Lord or Master of the vessel.

ed with his younger son in the vessel in the guise of a Fakír,\* and desired them to convey him to the land of Sumadara. To this they assented, declaring that his resolution was conformable to the words of the Prophet. Sultan Muhammad accordingly sailed away in this vessel, and after a long voyage they arrived at the land of Pasuri, the whole of the inhabitants of which embraced Islamism. The next day Fakír went ashore carrying the Kúrán and presented it to the islanders to read, but none of them could read it.

Then the Fakír thought was this not the land alluded to by the holy Prophet. Then the Nakhúda Ismáil again set sail and arrived at another country named Lambri, which likewise embraced Islamism. The Fakír again went ashore, carrying the Holy Book with him, and presented it to them, but there was not one who could read it. He immediately went again on board the ship, and arrived at the land of Harú, which likewise embraced Islamism, but when the Fakir went ashore with the same Book he found that none of them could read it. He then enquired for the country Summadra, and was informed that he had passed it. Upon this he returned to the vessel and set sail to Perlac, where he went ashore and brought them over to Islam. After this he sailed for Sumadra, where he met Marah Silu, following his occupation among the rocks of the shore.

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\* A religious man who has taken the vow of poverty.

The Fakir then asked him the name of the country, to which he replied, "Sumadara.—"

"Who is the head-man of it?" asked he. "It is your servant," said Marah Silu, then the Fakir brought him over to Islam and taught him the words of testimony.

When Marah Silu went to sleep after this occurrence he dreamed that he was face to face with the Holy Prophet, who desired him to open his mouth, on which the Prophet spat into it; and he immediately awoke, and his body had the odour of Nara-wastu.\* When the morning came the Fakir landed, and brought with him the Kurán, ordered Marah Silu to read it, which he did. Then said the Fakir to Sheikh Ismail, the Nakhúda of the vessel, "This is the land of Sumadara mentioned by the Holy Prophet." Then Sheikh Ismáíl landed all the royal accoutrement which he had brought with him and installed Marah Silu, as Rája under the title of Sultan Malik-él-Salih. After this Sheikh Ismáíl set sail and returned to Mecca and the Fakir stayed in the island of Sumadara for the purpose of establishing the doctrine of Islam. †

In another account it is stated that in the reign of Rája Kitchil Besar-ibn-Tengah of the city of Malacca' he dreamed one night that he saw Nabi ‡ Muhammad, who said to him, "I testify that God is the one God, and that that Muhammad is his Prophet," and Rája

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\* Name of a delightful perfume of a yellowish colour, and compounded with several scented ingredients.

† *Vide* Dr. John Leyden's "Malay Annals," pp. 66—69.

‡ *Nabi* is a prophet, *Rasúl* an apostle. The latter is greater and more specially sent. Every *Rasúl* is a *Nabi*, but every *Nabi* is not a *Rasúl*.

Kitchill Besar did as he was directed by the Prophet, who conferred on him the name of Sultan Muhammad. Next morning, said the Prophet, at day-break, there will arrive a ship from Jiddah, and will land on the shore of Malacca and perform *Namasz*, \* listen to their words. Rája Kitchill Besar said, very well, he would do so, and not neglect, and immediately Nabí Muhammad vanished. Next morning when he awoke, his body smelt like the perfume Nara-wastu, and he perceived that he had the appearance of being circumcised.

Then said the Rája, this visit is certainly not of Satan, and his mouth did not stop from pronouncing the word of testimony, so that all the female servants were astonished to hear him, and the queen said, "surely Satan has possessed the Rája, or else he is gone mad, very well, we must speedily inform the *Bandahara*. † He quickly received the information, and arrived at the place, where he found the Rája continuing to repeat his confession. The Bandahara asked him what language he was speaking. The Rája said he had seen the Prophet Muhammad in a dream, and related to him the whole event. Then said the Bandahara, what token is there that the dream is true. Rája Kitchill Besar said that he had the appearance of circumcision and that

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\* Prayers, *i. e.*, those only offered to the Almighty and especially those prescribed by law, said five times a day.

† *Bandahara* means the Rája's chief executive officer, minister, law-giver and ruler over the peasantry.

the Prophet had told him, that about midday, a vessel would arrive from Jiddah, and would land her crew to say prayers on the shore of Malacca, and that he was directed to conform to their directions. The Bandahara was astonished, and admitted that the dream must be true, if the vessel arrived, but that otherwise it would be a seduction of Satan. The vessel arrived at the appointed time, and landed the crew to say their prayers on the shore. In this vessel was Seyed Abdul Azid who officiated, and all the people of Malacca were astonished, and said, " what are all these people nodding at in such an uncommon manner?" and great numbers assembled to see them, with a tumultuous noise. The Rájá, however, quickly mounted his elephant and went out to them, followed by all his great men, and perceived that they were the same whom he had seen in his dream, and mentioned it to the Bandahara and chiefmen. When the crew had finished their devotions, the Rájá made his elephant sit down, and took up the Nakhúda upon his own elephant, and carried him to the city; and the Bandahara with all the chiefmen, adopted Islamism, and their example was followed by the rest of the people, at the order of the Rájá, and the Makhdum was their Guru, \* and he conferred on the Rájá the name of Sultan Muhammad Shah. †

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\* A spiritual teacher.

† *Vide* Dr. John Leyden's 'Malay Annals,' pp. 91 — 93.

Probably in no country is the custom of keeping to the national costume more thoroughly adhered to than amongst the Malays. Civilization has naturally introduced many articles of clothing ; but no matter how many of these are adopted, the Malays from the greatest men down to the lowest grade always wear the Sarong. This is an oblong cloth from two to four feet in width, and some two yards long. The ends are sewn together, forming, as some writers have described it, a wide sack without a bottom. It is tucked round the waist, descending to the ankles, so as to enclose the legs like a petticoat. It is fastened round the waist by a narrow waist-band or belt. Above this they wear a shirt and a coat of modern cut, which is made of any kind of stuff that suit the fancy of the wearer. On their heads they wear a Batavian handkerchief which is stiffened and tied with a peculiar twist round the head.\* Although the general character of the native costume is preserved, yet they seem inclined to adopt many of the more convenient parts of the European dress. The slipper or *chénnélá* in use amongst them, is in shape, not like those worn by the Moors. It is usually made of leather, the toe part is terminated by a long pointed strip. It is a most in-

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\* Mr. Crawford is of opinion that the Malay took the idea of handkerchief as worn upon the head from India ; but it is far more probable that it had its origin far enough back, with the original tribes who came from Menang Kabow, and who are, as has been intimated, looked up to by the better class of Malays, as the ancestors from whom they trace descent.—“Perak and Malay.” p. 148.



convenient kind of shoe, scarcely covering the toes and presenting peculiar difficulties to the walker. The rich and the men who are in the Government service have adopted to cover their feet with socks and shoes. The women, in like manner, wear the cloth tucked round their loins and descending in the form of a petticoat as low as the ankles. It is folded somewhat differently from the cloth worn by the men, and never tucked up as with them. They have also a kind of kabáya or jacket reaching below the waist, which is intended to cover the bosom.

When they go abroad they cover their heads and shoulders with a Sarong, and when they meet men they extend the upper part of the Sarong by holding their hands at a distance on either side of the head, so as to form with the garment a long narrow slit, covering the face and forehead in such a manner that the eyes alone are visible to the stranger's gaze, the women of better means dress with much care and splendour, and sometimes a good deal of taste. The hair of the women, however, is long and luxuriant, and is twisted up at the back in the universal mode that was perhaps established in the days of our mother Eve. Through this knot, which is often so jetty and massive that it resembles the chignon of modern European society, are thrust diamond-headed pins—very often of gold; and on festive days jasmine and other sweet-smelling flowers are introduced in very tasteful manner. About their necks

they wear chains and beads of gold, and are all provided with ear-flowers.

Unlike most Asiatics, the Malays reject ornaments in the nose, but are fond of bangles, bracelets, necklaces and finger rings. The covering of the feet is generally omitted by the women. Simply as the Malay woman's costume is, it is far more unbecoming; and it possesses this advantage, one which will be held in esteem by every Moorish pater families in our land, namely, it is never out of fashion so as to cause the outcry so cleverly stirred up by the Moorish ladies—"No ornaments to be had."

The following picture of a Malayan beauty, taken from one of the most popular poems among the Malays, will serve a better description than any of my own before the readers of the standard of female elegance and perfection which will give an accurate idea of the personal decorations on nuptial occasions:—

"Her face was fair and bright as the moon, and it expressed all that was lovely. The beauty of Ráden-Pútri far excelled even that of the Widadári Déwe Ráti: she shone bright even in the dark, and she was without defect or blemish.

So clear and striking was her brightness, that it flashed to the sky as she was gazed at: the lustre of the sun was even dimmed in her presence, for she seemed to have stolen from him his refulgence. So much did she excel in beauty, that it is impossible to describe it.

Her shape and form were nothing wanting, and her hair when loosened hung down to her feet, waving in dark curls: the short front hairs were turned with regularity as a fringe, her forehead resembling the ehendána stone. Her eyebrows were like two leaves of the Imbo tree; the outer angle of the eye acute and slightly extended; the ball of the eye full, and the upper eyelash slightly curling upwards.

Tears seemed floating in her eye, but started not.

Her nose was sharp and pointed; her teeth black as the Kómbang; her lips the colour of the newly cut Mangústin shell. Her teeth regular and brilliant her cheeks in shape like the fruit of the Dúren; the lower part of the cheek slightly protruding. Her ears in beauty like the Giánti flowers, and her neck like unto the young and graceful Gádung leaf.

Her shoulders even, like the balance of golden scales; her chest open and full; her breast like ivory, perfectly round and inclining to each other. Her arms ductile as a bow; her fingers long and pliant, and tapering like thorns of the forest. Her nails like pearls; her skin bright yellow; her waist formed like the pátram when drawn from its sheath; her hips as the reserved limas leaf.

Like unto the púcdak flower when hanging down its head, was the shape of her leg; her foot flat with the ground; her gait gentle and majestic like that of the elephant. Thus beautiful in person, she was clothed

with a chindi patóla of a green colour, fastened round the waist with a golden lúlut or cestus: her outer garment being of the Mégamendúng (dark clouded) pattern. Her Kemban (upper garment) was of the pattern jing gomosi, edged with lace of gold; on her finger she wore a ring, the production of the sea, and her ear-rings were of the pattern nóto brongto.

On the front of the ear-studs were displayed the beauties of the Segára múnchar pattern (emerald encircled by rubies and diamonds), and she bound up her hair in the first fashion, fastening it with the glúng (knot) bobokóran, and decorating it with the green champaca flower, and also with the gámbir, meláti, and minor flowers; and in the centre of it she fixed a golden pin, with a red jewel on the top, and a golden flower ornamented with emeralds. Her necklace was composed of seven kinds of precious stones, and most brilliant to behold; and she was highly perfumed, without it being possible to discover from whence the scent was produced.

Her Jámang (tiara or head ornament) was of the fashion Sódó Sáler and richly chased; her bracelets were of the pattern glang-kána, and suited the Jámang.

Thus was the beauty of her person heightened and adorned by the splendour of her dress.

The Malays have universally two meals in the day; one just before noon, one between seven and eight o' clock in the evening: the former, which is the principal

meal, corresponding with the European dinner, and distinguished by the term *Mángán-áwan*, or the day meal, the latter, termed *Mángán-wéngé*, or evening meal. They have no regular meal corresponding with the European breakfast; but those who go abroad early in the morning, usually partake of a cup of coffee and some rice cakes before they quit their homes, or purchase something of the kind at one of the numerous boutiques, or stalls, which line the public roads, and are to the common people as so many coffee or eating-houses would be to the European; rice, coffee, cakes, boiled rice, soups, ready dressed meats and vegetables, being at all times exposed in them.

On occasions of festivals and parties, when many of the people are assembled, the dishes are extremely numerous and crowded; and hospitality being a virtue which the Malays carry almost to an excess.

The chewing of betel-leaf (*Síre*), and the arracnut (*pi'nanang*), as well as of tobacco (*Tambáko*), and *gámbir*, is common to all classes. The *Sí'ri* and *pinang* are used much in the same manner as by the other natives.

The three most remarkable events in the history of an individual are his birth, his marriage and his death. To these accordingly have the greatest number of forms and ceremonies been attached.

As soon as it is observed that a Malay woman is in the ninth month of pregnancy, a feast is given to the

female relations and friends, at which a Fathihah is recited in the name of Sitty Fatimah, the amiable daughter of our holy Prophet and the dutiful wife of Ameer-il Mumineina Ali ibnu Abutalif, at this occasion presents are made, consisting of native sweet cakes, bananas and roll of betel-leaf containing a bit of arrecanut, and a small quantity of musk and a piece of sweet scented flowers.

The children of Malays are received into the world quite in religious form, prayer being said, and the Azan or Allah Akbar, pronounced by the father or an elder of the family, with his lips to the tender infant's ear.

On the seventh day the head is shaved; and later on the religious ceremony, common to all Muhammedans, is performed.

The Malays are on the whole a moral people, and though by the Muhammedan religion a man is allowed to marry four wives if he can support them, it is rare for a Malay to adopt this custom. Marriages are invariably contracted, not by the parties themselves, but by their parents or relations on their behalf.

During the period that intervenes between the applications of the friends of the boy to the parents or guardians of the girl for their concurrence in the match, and the obtainment of it, her condition is distinguished by the term *tétakon* (solicited) when the consent of her parents is obtained, it is termed *Bálámáar* (settled).

After matters proceed thus far, presents are inter-

changed and the acceptance of them render the contract binding. The general prevalence of similar customs cannot fail to strike those who are acquainted with the nature of the *sponsalia dona* of the Romans, and the marriage ceremonies detailed in various passages of Scripture. \*

On the day of the marriage (for which one that is considered fortunate† is previously selected), the bridegroom dressed in his best clothes, mounted on an open conveyance, accompanied by all his friends and relations and attended with music in the front and rear, proceeds after sunset to the dwelling of the bride.

As soon as the bridegroom is seen approaching, a party of men go forth to do him homage, as if the very word of Scripture "Behold the bridegroom cometh, go ye out to meet him," and also a white cloth is spread for the bridegroom to walk on, besides the performance of whimsical ceremony called *Alatti* and the sprinkling of rose water. The father of the bride or an elder of the family then conducts the bridegroom and his attendants, and makes them all sit down on carpets or mats already spread on ground. When the guests have refreshed themselves by masticating betel, †The ceremony as usual to all Muhammedans at this occasion

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\* Genesis, Chap. xv. 2; xxiv, 5, &c.

† Fortune was so much considered in the making of those matches among the Romans, that the augurs were always called along with the witnesses to a marriage contract, to pronounce upon the happy results of the settlement which the latter attested.

"Veniet cumsignatoribus Auspex.—Juvenal."

is performed, in accordance with the rites and customs of the nation. When the solemnization of marriage is over a sumptuous entertainment is given to the friends and relations of both parties.

The bride is, when dressed, set up in an apartment of the house in state, and holds a kind of drawing room, being visited by all her friends and relations, in company with vast numbers of guests attracted by the occasion. After the religious rite is over the young couple are placed together in a seat of honor above the rest of the guests; and the whole ceremony is made as much a feast and time of rejoicing as amongst the civilized nations of the West. Such are the ceremonies which are usually observed on the marriage of a virgin bride. A widow is always married without ostentation or festivity.

A virgin bride of the poorer class is married in the same manner. The expenses of both sides fall upon the bridegroom. The marriage festivities, in the cases of persons of the higher and middle-classes, when the bride is a virgin, usually occupy a period of seven days.

The above is a short account of the betrothal, as usually performed by the middle classes. The exact programme of the ceremonies depends of course upon the means of the parties; the very rich do all they can to squander money by keeping open house with feasting, dancing, and singing for a couple of days more.



The ceremonies at death are of a simple character, the moment the spirit has fled the mouth and the eyes are closed after having pronounced the Kalimah Sáhâhdat; because, if left open, they would present a disagreeable spectacle. The two hands are placed over a little higher the navel, the right hand over the left, and the two great toes are brought in contact and fastened together with a thin slip of cloth, to prevent the legs remaining apart.

The corpse is then laid upon a framework, under which they excavate a hole about  $\frac{1}{2}$  knee deep, and six feet long, over which the body is washed and wrapped in a white cloth ; and then the corpse is placed on a bed, the face being exposed. A lamp is kept constantly burning at the head, together with frankincense, until every preparation is completed for removing the corpse to the place of interment. Should the individual have died in the evening, the burial takes place before midnight; if he die at a later hour, or any other circumstances compel to defer, he is buried early on the following morning. When a sufficient number of persons have assembled to form a funeral procession the body is again washed\* with warm

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\* The Romans likewise were in the habit of washing the dead body several times before interment with warm water.

" Pars calidos laticeos et aënea undantia flammis,

" Expediunt : corpusque lavant frigentis et unguunt."

*Virgil, Æneidos, lib. vi. lin. 218.*

By referring to the Old and New Testament, the same practice will be found to have prevailed among the Jews : indeed, it seems to have been very general.

water, about which they pay much attention, carefully cleaning the nails &c., after that they perform Wolú for him ; *i. e.*, they wash his mouth, the two upper extremities up to the elbows ; the whole or half of the head and throw water on his feet. They at last wash the body with the water infused with camphor, mixed with the juice of some leaves. During the operation of washing the Kalimah Sáháhdát is repeated, either by the person washing or by another. Having bathed the body and wiped it dry with a clean piece of white cloth, they put on the Kaffen\* and paint the rims of the eye-lids with Sirma, † besides strewing sander wood powder, camphor &c.

It is then placed on a bier, covered with some valuable cloths, strewed with flowers and green leaves, and it is borne to the mosque, the mourners chanting the creed ‡ all the way. § On reaching the mosque, the bier is set down on the ground, and the funeral service is performed, in which some of the bystanders join, after which

\* The Kaffen or shroud consists of three pieces of cloth if for a man, and five if for a woman.

† Literally antimony, it is applied in a very subtile powder to the eye, or on the inside of the eyelids, to improve the brilliancy of that organ.

‡ Which is as follows:—

“ I confess that God is one, without a partner; that truly Muhammad is His servant and His Apostle. ”

§ In the Mishkat-ul-Mussabeeh it is stated, that when a bier passes an individual, the person is to stand up, and accompany it at least forty paces, *i. e.*, the distance of two hundred feet.

the bier is carried near the grave and one or two persons, relatives or others, descend into the grave \* to lay the body down; while two others take the sheet that cover the bier, twist it round, and lifting up the body put it under the waist; then standing one on each side of the grave hold on by the two ends, and by the assistance of two or three at the head, with as many at the feet, hand the body to the men who had descended into the grave. They then lay the body on its back, with the head to the north and feet to the south, turning its face towards the Kíbla (Mecca); and after covering the coffin, each person takes up a little earth, and having repeated over it some sentence in Arabic, puts the earth gently into the grave as is the custom of Christians, saying "You were taken from the earth, you go to the earth, and you shall come out of the earth." The grave is then filled up, being piled in the usual form; stones or boards are put at the head and foot of the grave, while in accordance with old usage a person pours a pot of water, thrice, beginning at the feet and terminating at the head † after which two sticks, with a flag on the top, are placed at each end. The priest afterwards placing himself at the head of the grave, rehearses a

---

\* The rule for digging a grave is, that if it be for a woman the depth should be to the height of a man's chest; if for a man, to the height of the waist.

† In Arabia and other countries it is not customary to pour water on the grave; but if it blow a hurricane, or should there be much wind, they sprinkle some water on it to prevent the dust from blowing about.

series of prayers called Talqin (instruction). \* The mourners having pronounced the Fathiháh in the name of the defunct prepare to return to the house, but after advancing about forty paces from the grave they make a stand, and again offer Fathihah in the name of all the dead in the burial ground conjointly. At this juncture, it is said two angels, viz: Munkír and Nakír examine the dead. Making him sit up, they enquire of him who his God and Prophet are, and what his religion is.

If he has been a good man, he replies to these queries; if a bad one, he becomes bewildered and sits mute, or mumbles out something or other. In the latter case, the angels severely torment him, and harass him with a whip.

The clothes used as a covering of the bier were carried precede the mourners homewards, which is a sign for the females at the house to depart.

---

\* Oh servant of God! Oh son of a handmaid of God! Know that, at this time, there will come down to thee two angels commissioned respecting thee and the like of thee; when they say to thee, "Who is thy Lord?" answer them, "God is my Lord" in truth; and when they ask thee concerning thy Prophet, or the man who hath been sent unto you, say to them, "Muhammad is the Apostle of God," with veracity; and when they ask thee concerning thy religion say to them, "Islám is my religion;" and when they ask thee concerning thy book of direction say to them, "The Kuran is my book of direction and the Muslims are my brothers;" and when they ask thee concerning thy Kíbla, say to them, "the Kába is my Kibla, and I have lived and died in the assertion that there is no deity but God; and Muhammad is God's Apostle," and they will say "Sleep, O servant of God in the protection of God!"

The mourners having reached the dwelling of the deceased, the priest again recites the *Súratul Yásín* (36 chap. of the *Kúran*) and *Fathihah*, and partake of an entertainment which has been already prepared for them and then take their departure.

On the third day relatives of the deceased invite the priest and others and having caused to offer prayers for the manes of the deceased person give them an entertainment which is repeated on the seventh, fifteenth, twentieth, thirtieth and fortieth days likewise. After which an annual feast was observed with more or less pomp, according to the respect in which the deceased was held, or the circumstances of the friends and relations who celebrate his memory.

Besides these regular feasts and ceremonies others common to Muhammadans are regularly observed ; so I shall not enter into a tedious account of them.

Having now described the manners and customs of the Malays of the Island of Ceylon in the various stages and circumstances of life from the period of their introduction to this Island and up to the tomb, I shall close my account of them with "thanks and praise to Him who dieth not."

THE END.

---

## Appendix.

---



# A

The Malay year consists of twelve lunar months ; the names of which are pronounced by them in the following manner:—

		<i>Days.</i>
Muharram	...	30
Safar	...	29
Rabí-ul Awwal	...	30
„ „ ákhir	...	29
Jamad-ul-Awwal	...	30
„ „ ákhir	...	29
Rajab	...	30
Shaabàn	...	29
Ramalan	...	30
Sawwal	...	29
Dhul-Káadah	...	30
Dhul Hadjee	...	29*

In speaking of days of the month, the following are sometimes used:—

Sixteen	...	Sátu gláp
Seventeen	...	Dúa „
Eighteen	...	Teega „
Nineteen	...	Ampat „
Twenty	...	Dúa puloh
Twenty-one	...	Sálekor
Twenty-two	...	Dua líkor

and so on up to

Twenty-seven ... Tugu lékor

---

\* Once in eight years 30 days which year is called "Sanatul-Kabeesáh."



## B

### DAYS OF THE WEEK.

---

Monday	...	Hâri ithnâin	or Hari satu.
Tuesday	...	Hâri thalâtha	or Hari dua.
Wednesday	...	Hâri arbha	or Hari teega.
Thursday	...	Hâri Kamis	or Hari âmpat.
Friday	...	Hâri Jumahat	or Hari leema.
Saturday	...	Hâri Sabtu	or Hari ânam.
Sunday	...	Hâri ahad	or Hari tuju.

---

The Malays regard Sunday as an unfortunate day, on account of the night which follows it. This night, which is called the night of Monday, the learned Muslims and many of the inferior classes consider unfortunate, because it was that of the death of their Prophet ; but some regard it as fortunate, particularly for the consummation of marriage ; though not so auspicious for this affair as the eve of Friday. The day following it is also considered, by some, as fortunate ; and by others as unfortunate. Tuesday is generally thought unfortunate, and called the “day of blood” ; as it is said that several eminent martyrs were put to death on this day ; and hence, also it is commonly esteemed a proper day for being bled. Wednesday is regarded as indifferent. Thursday is called *el-mubarak* (or the blessed), and is considered fortunate, particularly deriving a blessing from the following night and day. The eve or night of Friday is very fortunate ; especially for the consummation of marriage. Friday is blessed above all other days as being the sabbath of the Muslims, it is called *el-fadeeleh* (or the excellent). Saturday is the most unfortunate of days.

## RELATIONSHIP.

As the Malays have a great variety of terms whereby to express the different degrees of affinity, it may, I hope, not be deemed altogether irrelevant to offer them here in a tabular form.

Father	Bápa or Hayahanda
Grand father	Nének or Dato
Great-Grand-father	Moyang
Father-in-law	Mertúah
Step father	Bapa-tiri. [ndha
Mother	Mak. Ibu. Má or Bhu-
Grand mother	Nanay or Moyang
Great-grand-mother	„ Moynang
Mother-in-law	Mertúa prémpúan or Bh-
Step mother	Mak tiri [undha mertua
Brother	Sudára lákì lákì
Elder brother	Abang. Kákáh
Younger brother	Adik.
Brother-in-law (by sister)	Ipér.
„ „ by wife	Do.
Sister	Sudára prémpúan
Elder sister	Káykah
Younger sister	Adik prémpúan
Sister-in-law	Ipér prémpúan
Uncle	Bápa Sudára. pa'su
Aunt	Mák múda or Máksu
Wife	Bíni, Istri.
Child	Anak.
First born child	„ Súlong
Last „ „	„ bongsó
Grand children	Chúchú.

# D

## NUMBERS.

---

1	Sá, Sátu, Suátu
2	Duá
3	Tiga
4	Ampat
5	Lima
6	Anam
7	Tujuh
8	Dilápan
9	Sembilan
10	Sapuluh
11	Sa'blas
12	Dua'blas
13	Tegablas
14	Ampatblas
15	Limablas
16	Anambblas
17	Tujuhblas
18	Dilapanblas
19	Sambilanblas
20	Duapuluh
21	Duapuluh sátu
30	Tiga puluh
40	Ampat puluh
50	Lima puluh
60	Anam puluh
70	Tujuh puluh
80	Dilapan puluh
90	Sambilan puluh
100	Sarátus
200	Duaratus puluh
1000	Saribu puluh
10000	Salaksa puluh
100000	Sá puluh laksa
1000000	Sá ratus laksa

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# GENERAL PRINCIPLES OF THE STRUCTURE OF LANGUAGE

BY

JAMES BYRNE, M.A.

DEAN OF CLONFERT

EX-FELLOW OF TRINITY COLLEGE, DUBLIN

IN TWO VOLUMES

[Attention is respectfully requested to the accompanying Preface  
and List of Contents]

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## PREFACE.

---

THE science of language contains two parts which are distinct from each other, the science of etymology and the science of grammar. The science of etymology investigates the general principles of the production and successive changes of the elements of which language consists, the laws of their expressiveness whereby they were connected in their original form with the elements of thought, and the laws of their subsequent alterations in utterance and in meaning. The science of grammar investigates the general principles of the structure of language, the causes which have determined the various modes of breaking expression into parts, and of putting the parts together in discourse, that prevail amongst the various races of mankind.

As a contribution to the former branch of the science of language, the author of this work hopes to publish, when he has revised it, a classification which he has made of Indo-European roots according to the general principles of expressiveness whereby they seem to have conveyed their fundamental meanings. And in the present publication he considers the influences which determine varieties of utterance among the various races. But with the exception of the latter, he is concerned here only with the second part of the science of language; and he would first briefly explain his method.

In studying the structure of language in the spirit of inductive science, with a view to ascertain the causes which determine it, the mind must move with continual alternation from fact to theory, and from theory to fact. "*Neque enim in plano via sita est, sed ascendendo et descendendo.*"<sup>1</sup> And as language springs from thought, embodying it in expression, we have in our own consciousness the cause and the production; and consequently the materials of theory are always within our reach in the laws of thought and expression. In the facts of language, so far as they are known to the scientific

<sup>1</sup> Bacon, *Novum Organum*, lib. i. 103.



inquirer, viewed in connection with the conditions amid which they are found, he will strive to penetrate as best he can to their causation. And the theory thus provisionally formed, he will proceed to correct by other facts, in the hope that by continuing the process through all the main varieties of language, the facts may all at length be seen in such scientific order as will reveal the truth as to their causation, and furnish a proof of the theory in the light of which they are viewed.

Now, such proof of the theory need not involve any reference to the process which has led to it. For no purpose could be served by recounting the plausible hypotheses which had to be abandoned, and the imperfect guesses which were gradually transformed by successive corrections, as facts were more widely studied and more carefully compared.

If the causes to which a theory attributes facts are not inextricably complicated with each other in their effects, and are capable of exact measurement in themselves and in their effects, the theory may possibly be proved by three steps: first, a deductive study of the causes, wherein the exact effects are proved which would follow from their action according to the exact degree in which they are supposed to operate; secondly, a proof that those causes, operating in a certain exact degree, are present among the conditions of the facts; thirdly, a proof that the facts which the theory professes to account for are the exact effects which should follow from this proved operation of the cause.

If, however, the causes and effects be not capable of exact measurement, each of these steps becomes insecure and needs circumspection. And so in the proof of a theory of the structure of language, the deductive study of the causes becomes an estimate of tendencies, which, however carefully it be made, is so vague that there is no certainty how far the supposed causes are adequate to produce the effects which may seem to be connected with them; and it is necessary, therefore, to make as wide a study as possible of all the causes which can be supposed to be concerned in the production of the facts, that what each contributes may be taken into account. The second step requires similar fulness in ascertaining for all the conditions which may affect the result, their presence, and an estimate of their degree. And the third step, instead of being an ascertained correspondence between the facts and the precise effects deduced from certain precise causes, becomes a proof that the facts vary with the variations of the causes in exact correspondence with the theory. For though the causes and effects be not capable of exact measurement, they can be

known as more or less ; and if the several elements of the complex facts to be accounted for vary through all their combinations in correspondence with the variations of the causes to which they have been assigned, there will be an inductive proof of their connection as cause and effect, according to the inductive method of concomitant variations.<sup>1</sup> The more various and manifold the causes and effects are, the stronger will be the proof of their connection as such which will arise from their corresponding variations as actual co-existing facts. For the more each influence varies in its own degree and in its combination with other influences, the more clearly is its action indicated by the co-existence with it, through all these varieties, of the proper effect in the due degree.

The following effort to establish a theory of the structure of language consists of three steps such as have been described. The first states the theory as a deduction from the laws of our nature, and is in itself quite hypothetical. It forms the subject of the first Book, which may be entitled a deductive study of the action of the causes which tend to affect the structure of language. The second and third steps may most conveniently be taken for each supposed cause separately, each cause and its effect being traced in corresponding variations through the facts of life on the one hand, and those of language on the other. Thus taken, they form the subject of a second Book, which may be entitled an inductive proof of the causes which have determined the structure of language.

Some of these causes affect language more profoundly than others, because lying deeper in the nature of man. One cause in particular, the quickness or slowness of his mental action, is so deeply seated that each of its varieties prevails over a large portion of the globe unaffected by local differences in mode of life and in physical circumstance. And its effect on language is similarly profound. It produces the leading characteristics by which the languages of mankind are distinguished from each other, and throws them into groups which belong to great divisions of the globe. The study of this cause comes naturally first in order, and to the evidence for it as a fact a space proportional to its importance is devoted. Its effect on language is so profound and subtle, and has consequently to be traced so deep into each language, that it is most convenient to give once for all in connection with this first investigation a full account of each language, so far as the materials admit and the importance of the language as a variety of human speech demands. In such connected view of the entire

<sup>1</sup> Mill's Logic, Book III., chap. viii. sect. 6.

grammatical system of the language. the true nature of each variety of structure which belongs to it may best be seen. And while these varieties when afterwards studied in connection with each cause can be referred to as already given, those which are connected with the first cause can be singled out from the rest by marking with an asterisk in the table of contents the paragraphs in the grammatical sketches which refer to the action of that cause. The other causes whose action may thus be briefly stated by mere references to what has gone before, can themselves also be briefly evidenced as present by leading facts in the history and life of man.

To the two Books are prefixed the definitions and explanations which were formed in the course of the investigation to give exactness to the apprehension of facts in order the better to see how they were to be accounted for.

Besides the interest which belongs to language itself as the most astonishing fruit of the mental activity of man, the scientific study of its production possesses another interest as naturally forming the first division of the scientific study of the phenomena of human society. For language is the earliest product of the social life of mankind, and is a condition of all the rest. And the science of language, as naturally first in order, may be expected to throw light on the method, and to furnish data for the principles, of the other sciences which investigate the laws of man's social development. It penetrates to the roots of history in the mental character of the various races, and ascertains definite characteristics of mental action with which, as they vary from race to race, all the other phenomena of national life must harmonise.

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## THE LEGENDS OF THE PANJAB.

BY  
*Richard Arnold*  
CAPTAIN R. C. TEMPLE,

BENGAL STAFF CORPS,

FELLOW OF THE ROYAL GEOGRAPHICAL SOCIETY, MEMBER OF THE ROYAL ASIATIC  
AND FOLKLORE SOCIETIES, THE ANTHROPOLOGICAL INSTITUTE,  
AND THE ASIATIC SOCIETY OF BENGAL.

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The Legends will be given in original, in the Roman character, with translations, but without notes, the object of the publication being to record, in a form useful to investigators, the stories and legends preserved in the memories of the wandering bards of the Panjâb. These men are the chief repositories of the folk-tales of the people, and year by year under British rule they are becoming fewer and fewer. Their disappearance eventually as a class is a mere question of time. They are always entirely uneducated, and their songs are invariably composed in the ordinary colloquial of their homes. Their recitations are therefore not only valuable as folklore, but are precious records of the Panjâbî dialects of the day.

The following *twenty* legends have been already collected directly from the lips of the bards themselves, and it is hoped that in time many more will be added to their number.

*Rasâlû Class of Legends.*

The Adventures of Râjâ Rasâlû, from Râwal Pindî.  
Râjâ Rasâlû and Mahtâ, from Karnâl.  
Râjâ Hari Chand, from Karnâl.  
Rânî Adhik Anûp Deî, daughter of Râjâ Sirkat (or Sirikap),  
from Jalandhar.

*Sarwar Class of Legends.*

Life of Sakhi Sarwar Sultân, from Firozpûr.  
Sakhî Sarwar and Dâñt, from Firozpûr.  
Sakhî Sarwar's Marriage, from Firozpûr.  
Sakhî Sarwar and Jâtî, from Firozpûr.  
Sakhî Sarwar and 'Isâ Bâniyâ, from Jalandhar.  
Sakhî Sarwar and 'Isâ Baniyâ, from Ambâlâ.

*Legends of Saints.*

Marriage of Ghâzi Sâlâr, from Ambâlâ.  
Story of Dhannâ, the Bhagat, from Amritsar.  
Story of Nâmdeo, the Bhagat, from Amritsar.  
Lohârî Jalâlî and Ūde Shâh Faqîr, from Jalandhar.  
Story of Ballâ Shâh, from Kapurthalâ.  
Story of Sayyid Bhîk, from Kapurthalâ.

*Legends of Kings.*

Râjâ Chandarbhân and Rânî Chandkanwâr, from Jalandhar.  
Râjâ Rathan Sain, from Jalandhar.  
Râjâ Pirthî Singh, from Jalandhar.  
War of Salîm Shâh with Khân Khawâs, from Kapurthalâ.



## SPECIMENS.

### I.

*From the Adventures of Râjâ Rasûlû.*

Râni ne kahâ,  
Mahlân heth phirandiâ Râjâ,  
Shâhid phirîn ki chor ?  
Ike Râjâ mere dâ wairî hain ?  
Ike kharâ î dhôr ?

Râjâ ne jawâb dittâ,  
Chorân maile kapre, Rânî,  
Shâhid ike rang ho :  
Nâ main tere Râjâ dâ wairî hûn,  
Nâ kharâ î dhôr.  
Marion ândâ dûr se,  
Ithe kharâiâ jor.

Said the Rânî,  
O Râjâ wandering beneath the palace,  
Dost wander a true man or thief ?  
Or art thou my Râjâ's enemy ?  
Or does an animal stand there ?

Answered the Râjâ,  
Thieves' clothes are dirty, Rânî,  
True men are clean :  
I am neither thy Râjâ's enemy,  
Nor do I stand here an animal.  
I come from afar for my quarry  
And stand here of necessity.

## II.

*From Sakhi Sarwar and 'Isâ Baniyâ, Jalandhar Version.*

'Isâ Âgre dâ bepâri  
 Latthâ de samundar târî :  
 Hîre, motî, lâl wiâjhe ;  
 Dam bahot kharchâe.  
 Berâ banne lâwan kâran  
 Ân mallâh disâe.  
 Mallâhân nûn kî 'Isâ âkhe ?  
 " Ginke haq dinnâ main âpe ;"  
 Berâ merâ banne lâo,  
 Damrî leo ginâe.

'Isâ the trader of Âgrâ  
 Went across the ocean :  
 Bought diamonds, pearls and rubies ;  
 And spent much money on them.  
 To take his ship across  
 He came and desired the sailors.  
 (This is) is what 'Isâ said to the sailors,  
 " I will count and give you your dues myself ;  
 Take my ship across  
 And count and take your dues."

## III.

*From Sakhi Sarwar and Dâni.*

Dâni âkhe, " sun, arbele !  
 Fuqrân khade aiyar chhele :  
 Sâbit kar mâwân nûn mele.  
 Siriân khuriân khallân andar  
 Kin sí rûh pawâiâ ?"  
 " Tin sai saṭh malang Allâh dâ ;  
 Othe nahîn sí qadam asâdâ :  
 An faqîrân kîte nâre :  
 Sâhib ne sun pâiâ. "

Said Dâni, " Listen babbler !  
 The *faqîrs* ate the kids of the flock :  
 Making them whole thou didst restore them to their mothers.  
 Into the heads and hoofs and skins  
 Who had put the life ? "  
 " (They were) three hundred and sixty men of God ;  
 No foot (hand) of mine was there :  
 Together the *faqîrs* made a prayer  
 And God heard and granted it. "

## IV.

*From the Story of Dhannâ, the Bhagat.*

Dhannâ jangal gawwân châre  
 Brâhman niklio âe ;  
 Nahâe, dhoe, pûjâ visthâre,  
 Baithâ dhyân lâgâe.  
 Dhannâ kahndâ, " Sun, Bhâi Dâdâ,  
 Sânnûn vî bhagti lâe. "

Dhannâ was grazing cows in the pastures.  
 A Brâhman came up ;  
 Bathed, washed, laid out his gods for worship,  
 Sat down and began to meditate.  
 Saith Dhannâ, " Listen, Friend Brâhman,  
 Bring me also the saintship. "

## V.

*From Sakhi Sarwar and Jâti.*

Sâin Sachche, teri dhano pârijâ !  
 Jal thal Maullâ tûi hai !  
 Rabb, tero nâm dhyâie !  
 Kyâ kyâ qudratân thâpdâ,  
 Bairangî Sâhib jâpdâ !  
 Sâji dharti te âsmân  
 Bâjh thamân kalâ tîkâie !

O True Lord, blessed is thy creation !  
 Thou art God of the land and sea !  
 O Lord, let us meditate on thy name !  
 What wonders hast thou performed,  
 O Lord appearing in many forms !  
 Thou hast created the earth and sky,  
 Raising the machine (sky) without pillars !

## VI.

*From Sakhi Sarwar's Marriage.*

Ralke ghaṇḍê pâuṇde,  
 Pîrân nûn pîr sadâunde.  
 Ai Pir Panjâule,  
 Dîwânâ, khush rang dâ !  
 Ghaṇḍi leke chaliâ Wadhârâ.  
 Ghar Sayyidân de wajje wadhârâ :  
 Mele âweñ. Pîr Farîdâ,  
 Tere utte karm Nabbî dâ !

Together they fasten the marriage-knots,  
 Saint calling to saint.  
 —O Saint of Panjâl,  
 Ecstatic and beautiful !  
 Wadhârâ went taking the marriage-knots.  
 Drums are beaten in the Sayyids' house :  
 The guests come. O Saint Farîd,  
 The Prophet's blessing on thee !

## VII.

*From Sakhi Sarwar and 'Îsâ Bâniyâ, Ambâlâ Version.*

'Îsâ Bâniyâ jahâj ladde, jî,  
 Te jotishfân nûn puchchhe, jî :  
 Sâdî jahâj kiweñ banne lagge, jî ?  
 Sawâ lakkh rupaye dî sukh sukho, jî,  
 Osî wakht jahâj banne lagge, jî.

'Isâ Bâniyâ loaded his ship, sir,  
 And he asked the astrologers, sir :  
 How shall my ship go across, sir ?  
 Vow a vow of one and a quarter *lákhs* of rupees  
 (Rs. 125,000), sir,  
 That your ship may go across at once, sir.

*Applications may be addressed to Captain R. C. Temple,  
 Cantonment Magistrate, Ambálâ, Panjâb, to the SUPERINTEN-  
 DENT, Education Society's Press, Bombay, or to Messrs.  
 TRÜBNER & Co., 57 and 59, Ludgate Hill, London.*



## LOISETTE'S MEMORY SYSTEM

### COMPARED WITH MNEMONICS.

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THE perusal of Mr. Loiset's prospectus conveys strongly the idea that not only is his system original but that it is different from all others. He refers to the origin of his "discoveries," and says most distinctly that he "uses none of the 'localities,' 'keys,' 'pegs,' 'links,' or 'associations' of mnemonics." In *Knowledge* of January 25th, 1884, Mr. R. A. Proctor, the editor, gives strong testimony in its favour, and remarks that after a thorough examination he had no hesitation in thoroughly recommending it. It can fairly be assumed that Mr. Proctor never studied mnemonics, for writing on the same subject in the *Newcastle Weekly Chronicle* a few months ago, he repeats his approval, adds that he believes it to be different to all other systems, and challenges those who believe that the system is not original to expose it. On the other side, Mr. R. Woods Colquhoun, in the *Educational News* of August 25th, 1883, who joined a class of twelve or fourteen, says:—"The result has been very disappointing, not only to myself but to all the other members of the class. The system at the best is only a broken reed, and the labour and difficulty in its practical application will, I expect, be found too great for most people in this busy age. Not a single member of the class to which I refer has been able to turn the system to any practical account whatever, so far as I have been able to find out." The Abbe Chauvauty, of Lourdes, also gave Mr. Loiset a good testimonial, but he has since withdrawn it, for reasons which he gives in a strongly worded "letter," recently published that he sent to the "Professor." In "All about Mnemonics" Mr. Middleton, the author, says that Mr. Loiset's system is not original; and in a review of Mr. Middleton's book the *Christian World* corroborates the statement. The following comparison of the system with others shows very plainly that Mr. Loiset's claim to originality cannot be sustained, and that his statement that his system uses no "keys, pegs, links, or associations," is likewise incorrect.

Most mnemonists use what is variously called a key, memory table, nomenclature table, &c., consisting of 100 words, which are to be connected with each other and used as pegs or links with which to associate facts or ideas. The majority of mnemonists form this table in such a way that any word in it denotes its consecutive order. Mr. Loiset's list, until he altered it, greatly for the worse, [see page 6], was termed a "Correlator," and consisted of 100 words, each associated to the other, being in fact simply an arrangement of one hundred "associations." But the system, the professor said, used no "associations." The pupil was therefore directed to "affiliate." This word was afterwards discarded as a poor substitute for "associate," and the word "correlate" used instead. The meaning, however, was the same; and the pupil had, like any other pupil of any other mnemonist, to associate one hundred words, to be used as prompters in learning any series of facts consecutively. While other mnemonists select words expressing their consecutive order, Mr. Loiset contented himself by allowing the final consonant of each tenth word to express its numerical position. Each word, however, was associated to the one preceding and following it, on a plan differing but little from that adopted by Dr. Pick, who lectured on his memory system at the London Polytechnic in 1862.

Dr. Pick defined the laws governing the reproduction of ideas as being those of analogy, opposition, co-existence and succession, Mr. Loiset calls this "recollective analysis," and gives the laws as "inclusion," "exclusion" and "concurrence." The first, "inclusion," is merely the law of analogy under another name. Pick says regarding this:—"analogous ideas reproduce each other and are those which have one or more qualities in common." Mr. Loiset gives exactly the same meaning to the law of "inclusion," although, as usual, in different words. He says:—"Inclusion indicates that there is an overlapping of meaning between two words, or that there is a prominent idea or sound that belongs to both alike." In associating the words "ladder" and "lad" he says "it is inclusion by sound—'lad' being common to both." Dr. Pick defined the law of opposition as those containing qualities wholly different from or opposed to each other. Mr. Loiset calls this law "exclusion," and defines it as meaning antithesis. In giving examples Mr. Loiset instances "righteous—wicked," "hot—cold," "old—young." One of Dr. Pick's pupils (Rev. J. H. Bacon) gives "virtue—vice," "light—darkness," "old—young," as examples of this rule. Dr. Pick's third law of "co-existence" he defines as that of the recalling of ideas which at some former period have been in the mind at one and the same time. Mr. Loiset terms "concurrence" what has been thought of together. Dr. Pick's fourth law of "succes-

sion," termed by others "cause and effect," is really included in the third law, and Mr. Loisetle discards it. Mr. Loisetle's example of this rule—"walnut tree—orchard"—may be compared with a similar example given by Pick—"garden—apple." Except in name the principles of both systems appear to be the same.

Mr. Loisetle's list of one hundred words, referred to above, had, like that of the other mnemonists, to be thoroughly committed to memory. The originality of the method of doing this will be seen from a comparison with other systems. Each of the words in Mr. Loisetle's "correlator" has some connection with that preceding and following it. Mr. Loisetle is careful to impress upon his pupils that they are committing to memory, not by repetition, but by analysis, and directs them how to take two words at a time and by comparison or analysis associate them. For instance the words "plow and sword" are to be placed in the mind together and associated, or to use the Professor's term, "correlated." Next the word "sword" is placed in the mind with fish; then "fish" with "scales"; followed by "scale—ladder," "ladder—lad," &c. By learning the series in this manner, and by repeating each set of ten backwards and forwards, the pupil finds that he can repeat the whole in a similar manner. In his book on "Rational Memory" Dr. Pick gives several lists of words relating to each other, and it is interesting when considering Mr. Loisetle's claim to originality to peruse the instructions Dr. Pick gave for committing to memory lists of this character. He says under the heading of "Association of Ideas":—"When we compare two ideas, we search out and place side by side the qualities which they possess in common, and those on the other hand by which they are distinguished from each other. Now this operation involves an effort of the mind and produces an attention which inevitably strengthens the impression, and if at any subsequent period either one of the two ideas which have thus been compared and analysed presents itself to the mind it will recall the other immediately and distinctly. Now, if there be a series of such analogous or opposite ideas which it is desired to retain by heart, the rule just described still holds good, and the task will be found easy if set about with care and deliberation. Merely compare the first idea with the second, the second with the third, and so on; no more than two ideas, however, being taken up at the same time." The Dr. gives examples and adds that if care has been taken to associate in the manner described, the student will not only be able to recite the words in the list in their proper order, but will find that any one word will immediately recall the one preceding and following, and that he can with equal facility recite them backwards as forwards. The following are half a dozen words from each list:—



DR. PICK.	MR. LOISETTE.
Electricity—thunder	Gourd—Jonah
Thunder—storm	Jonah—gunwhale
Storm—blow	Gunwhale—smith
Blow—windpipe	Smith—forge
Windpipe—pipe	Forge—bellows
Pipe—music	Bellows—pipe
Music—harmony	Pipe—bagpipes

Mr. Loisetie very strongly condemns repetition and rote, and writes very harshly of Dr. Grey and his memory system. Dr. Grey in his third rule says :—" Let the reader charge his memory by *frequent repetition*. By this means the words will become *familiar*, how harsh and uncouth soever they may appear at first." Those who know anything of Dr. Grey's system will agree that this rule was very necessary in his case ; but it is astonishing to find that Mr. Loisetie, after condemning Grey and the habit of learning by repetition, should adopt in principle this very law. In learning his table of one hundred words, Mr. Loisetie is most careful to enjoin upon the pupil the necessity of repeating the first ten words backwards and forwards before "correlating" the second ten, and the second before learning the third, and so with each series of ten. After the hundred words are impressed in the mind, the student is requested to repeat it daily forward and backward, or, if he is more ambitious, to repeat it two or three times a day for at least a month ; or if he wants to "obtain the very highest results," he is recommended to make four other lists of one hundred words each, and recite the whole of them both ways two or three times a day for a month. As if this was not sufficient in the way of repetition for any ordinary person, another list of 65 words is given, which, after being learnt, is to be *repeated twenty* times each way ! What is termed by Mr. Loisetie "the instantaneous Gordian Knot," consists in greater part of "memorising," which is simply the *repetition* of a series of associations six times backwards and forwards. Mr. Loisetie defends all this repetition by remarking that what is learnt by analysis and repeatedly recited backwards and forwards strengthens the memory, whereas learning by repetition weakens it. It is difficult, however, to perceive how, as Mr. Loisetie contends, the frequent repetition of one hundred words in less than a minute can stimulate and invigorate the memory.

It will be seen from the above that Mr. Loisetie had, like other mnemonists, a list of 100 words numbered consecutively, that his laws for classifying these words differed but very slightly

from those published by Pick and Bacon ; and that the mode of associating or correlating is exactly the same as that recommended by Dr. Pick in 1860. It will now be seen that the method of using this table of 100 consecutive words differed but little from the manner in which similar tables are used by other professional mnemonists. One of the feats of memory which a pupil is said to be enabled to perform by the Loisetian system is the repetition of 100 conundrums in their proper order. The 100 riddles are to be first committed to memory. Mr. Loiset does not actually say that these 100 riddles are to be learnt by repetition, but he implies it ; he says any one can memorise a riddle, and that the exact language of each is to be committed to memory. "Memorising," as previously pointed out, consists of repeating six times backwards and forwards.\* An italicised word in each riddle (termed "the prompting word") had then to be associated in their order with the 100-word table or "correlator." Mr. Loiset added that "the principal use of the correlator is where you wish to learn any series of facts in the *exact order* in which it is given." The first word in the 100-word table is "croquet," and the italicised word in the first riddle is "wrathful," and by connecting, associating, affiliating, or correlating—the reader can choose his own term—the word "wrathful" with the word "croquet," the order of the first riddle is ascertained. The riddle is as follows : "Why is a *wrathful* man exactly like 59 minutes past 12 o'clock? Because he is just upon the point of striking one." The following are a couple of methods of making the connection : "*croquet*—hoop—ring—prize ring—angry combatants—*wrathful* ; *croquet*—lawn—linen—collar—choler—*wrathful*." These words form the "affiliation," and each affiliation must be "perfectly memorised." This means a further analysis and a repetition six times backwards and forwards. The amount of labour involved in the learning of one hundred riddles by this method may be gauged when it is remembered that the hundred links have first to be thoroughly learnt and repeated at least thirty times ; that learning the hundred riddles involve another six

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\* In more recent lessons Mr. Loiset gives one hundred new riddles, and gives his pupils an illustration of how they may be memorised. The riddle in the example given is as follows : "Why was Noah the greatest financial genius ever known? Because he managed to float a company of limited liability whilst the rest of the world was in liquidation." You can infallibly remember this by memorising the following "correlations" : "WHY—knows why—knower—NOAH—flood—fire—grate—GREATEST—smallest—small—fine—FINANCIAL—money—money-king—clever head—GENIUS—fool—'yes, no'—KNOWN—well-known—well-being—bee—BECAUSE—cause—bringing to pass—manager—MANAGED—man—man of war—FLOAT—buoy—single—COMPANY—accompaniment—music—stop—limit—LIMITED—limited responsibility—LIABILITY—lie—lie down—rest—REST OF THE WORLD—globe—water—liquid—LIQUIDATION."

hundred repetitions, and that the hundred correlations or affiliations also require to be repeated six times. The use of the hundred links, termed the correlator, seems, however, to have been found too much like the hundred-word keys of other mnemonists, and it was accordingly dropped. This caused more trouble to the pupil as he then had to link a suggestive word in one riddle to a suggestive word in another,—one hundred new pegs had in fact to be learnt in place of those discarded, and it will be seen that the same plan was adopted in other cases.

The usual mnemonic method of linking such a series to a consecutive table of words is to associate the two unfamiliar ideas with an intermediate idea common to both. This is usually done in the form of a short sentence, and as a rule short sentences, especially when suggested by a familiar word, are better remembered than a series of disjointed words, each conveying an idea, and each liable to lead one astray. It is very possible that a person repeating the words "linen—collar—choler" six times backwards and forwards will recall the same words when wanted; but it is just as likely that, as in the case of "Numbers" suggesting "Deuteronomy," the word "linen" may suggest "shirt," and "collar" the more familiar "necktie" or "shirtstud" instead of "choler." As a matter of fact this is the tendency of this disjointed method of associating. This is one way in which the "Loisettian system" slightly differs from other systems, and this is termed the "Professor's" great discovery! Alas, even this erratic method is not original. Years ago Coleridge wittily showed how his mackerel suggested gooseberries, the gooseberries a goose, and the goose a swan; and everybody knows what fun Horne Tooke made of the same idea. He boasted that he could connect any word in the English language with another, even although it was a proper name. He was thereupon asked to connect "Jeremiah King" with "cucumber." Mr. Loisetle has possibly "memorised" what followed :—

"Tooke mused, then after a short pause,  
Said, 'Clearly their connection was  
Not compound but by derivation.  
The proper name, you all must know,  
May many changes undergo;  
Nor doubt that change this I can,  
Yet all applying to the man.  
Now, first he's Jeremiah King,  
To Jeremy King I next him bring;  
But Jerry King he still is meant,  
And Jer—King's fourth in the descent,  
Now tell me, Sirs, I see you smirking—  
The odds between Jer—king and gher—kin.'"

The following are specimens of the attempts made by Mr. Loissette to emulate Horne Tooke by connecting "Mrs. Ellis" with "gentle"; "Mr. James" with "agnostic"; "Mr. Holroyd" with "æsthetic"; and "Mr. Galloway" with "apprehension":—

**Mrs. Ellis—tell us—report—shoot—tendril—tender—gentle.**

**Mr. James—frames—pictures—Agnew—agnostic.**

Mr. Holroyd—holloa—Whistler—æsthetic.

Mr. Galloway — Gallop away — mounted patrol — police — apprehension.

If the student could rely upon the one idea suggesting the other, even this part of the system would possess some merit ; but the one does *not* always suggest the other, and it is idle to contend that they are meant to. If these formulas had to be learnt and recalled by mere analysis the student would, as he does, find his mind eternally wandering. By mere "predication" the word "James" is quite as likely to suggest "flames" as "frames," or any other word having a similarity of sound, and a tendency for the mind to run into another train of thought results. But it is not intended that such associations should be learnt or recalled by analysis. *They have to be learnt by heart.* Of course, as already pointed out, Mr. Loissette denies this and deprecates learning by heart and repetition ; but each of these associations have to be repeated six times backwards and forwards, and this, despite all condemnations of the value of repetition, is virtually learning by heart.

Although the "Loisettian system" is largely advertised as being wholly unlike mnemonics the more one studies the system the more remarkable appears its similarity to other well known systems. All mnemonists use substitutes for numerals. Mr. Stokes and many others use the following arrangement, which is termed a "key":—

[illegible]

Of course Mr. Loisetete "uses no keys," but adopts the *same* arrangement as substitutes for numerals, and terms it a "figure alphabet." Vowels are used with the consonants to form words to express figures. This arrangement Mr. Loisetete describes as the most perfect development of the device originated by Leibnitz about the year 1700. Mr. Proctor, always anxious to corroborate his friend, says he believes "Leibnitz actually invented it." As a matter of fact, Leibnitz did not invent any arrangement of this character, but on the contrary used an arrangement invented about fifty years previously. The "key" used by Leibnitz was published in 1648, by a German named Wenusheim or Winckelmann, and was as follows:—

1	2	3	4	5	6	7	8	9	0
B	C	F	G	L	M	N	R	S	T
P	K	V	—	—	—	—	—	—	D
W	Z	—	—	—	—	—	—	—	—

Mr. Loisetete can scarcely be ignorant, that the figure "key" he uses, and that which Mr. Stokes also uses, originated with Aimé Paris, who introduced it about 1820 as an improvement of Feinaigle's arrangement. Fauvel-Gouraud copied it and taught it in his system in America about 1840. Fauvel-Gouraud published the key in his work on "Phrenomnemotechny" at New York in 1845; and Pliny Miles, another American imitator of Fauvel-Gouraud, published the same key in 1850. It will thus be seen that Mr. Loisetete had no need to go so far back as 1700 for this figure alphabet while a copy of Fauvel-Gouraud's work could be picked up in New York for a dollar. It will also be seen below that this figure alphabet is not the only thing in his system for which Mr. Loisetete is indebted to this old American mnemonist.

One of the first things to which Mr. Loisetete applies his figure alphabet is the "Ratio of the circumference to the diameter." So also did Fauvel-Gouraud, and there is a striking similarity in the application. By learning sixteen sentences the mnemonic student is enabled to recite the ratio expressed by the integer 3 and 154 decimals. Each sentence is connected with a word suggesting the consecutive order of each. The following is Fauvel-Gouraud's method of doing this contrasted with Mr. Loisetete's:—



FAUVEL-GOURAUD.		A. LOISETTE.	
<i>Hero</i>	My deary dolly be no chilly.	<i>Cypher</i>	Mother Day will buy any shawl.
<i>Wand</i>	My love, I beg ye be my nymph.	<i>Wonder</i>	My love, pick up my new muff.
<i>Tooth</i>	Rich honey charms and moves a man.	<i>Tool</i>	A Russian jeer may move a woman.
<i>Thee</i>	A cupola seen off with a fiery top.	<i>Treat</i>	Cables enough for Utopia.
<i>Fort</i>	A cottage bamboo, a poem, or a glee.	<i>Forearm</i>	Get a cheap ham pie by my cooley.
<i>Fife</i>	A tassel, vain, or sappy grape.	<i>Fie</i>	The slave knows a bigger ape.
<i>Sexton</i>	A rare Albino, musky and fat.	<i>Sick</i>	I rarely hop on my sick foot.
<i>Savannah</i>	Jersey, Geneva, Genoa, or Seva.	<i>Senern</i>	Cheer a sage in a fashion safe.
<i>Hate</i>	A boy or peevish knave somehow rough.	<i>Ate</i>	A baby fish now views my wharf.
<i>Ninus</i>	An unholy marine editing a seige.	<i>Nino</i>	Annually Mary Ann did kiss a jay.
<i>Den</i>	A copy faint though rough and savage.	<i>Utensil</i>	A cabby found a rough savage.
<i>Elephant</i>	An old woman, a fine miss, or a showy Jew.	<i>Leaven</i>	A low dumb knave knew a message showy.
<i>12-Pounder</i>	A heroic Sepoy may fire where he chooses.	<i>Dozen</i>	Argus up my fire rushes.
<i>Thirteenth Guest</i>	An able wholesale and heavy unanimity.	<i>Threaten</i>	A bee will lose life in enmity.
<i>Fortune</i>	A hackney lame or lubber's feet.	<i>4th Dean</i>	A canal may well appear swift.
<i>Fife of Tin</i>	No very heavy sin.	<i>Fife Thin</i>	Never have a scene.

N.B.—The reader scarcely needs to be reminded that “Nino—Annually” has precisely the same numerical value as “Ninus—An unholy” — N representing 3 and L being the equivalent for 6, and so all through.



It will be seen from the above that Mr. Loisetle has not only followed this principle in such a way as almost inevitably to suggest the inference that he borrowed the whole idea from Fauvel-Gouraud, but, as may be seen in the second, tenth, and last lines, he has been unfortunate enough to use almost the same words. Indeed, Mr. Loisetle himself appears to have been struck by the resemblance, and in later editions of his lessons he strikes out the sixteen prompters—"Cypher" to "Fife thin," and to make it a little different extends the exercise to 209 figures. Instead of associating the word "cypher" to "Mother Day," the student is to associate "ratio" to "mother"; then "shawl" to "love"; "muff" to "Russian," &c.; "ratio" to "mother" is memorised by repeating the words "ratio—relation—dearest relation—mother" six times backwards and forwards, and then repeating the two extremes "ratio—mother—mother—ratio"—really and truly an easy way of learning by repetition. As a matter of fact, one of Mr. Loisetle's pupils who paid more attention to the theory and analysis than that of repetition invariably found that "ratio" suggested "rations," and that "rations" led to "rational," and then he found himself in grief, for he had lost his "mother." Most of these "correlations" have the same result. According to Mr. Loisetle the first word in each of the following couples should by the laws he gives suggest the one following, whereas they not only do not suggest each other, but on the contrary bring up totally different ideas:—Day—dayspring; get—get penny; busy—willing; wedding tour—Italy; newspaper—*Vanity Fair*; barrier—blind, &c.

In his prospectus Mr. Loisetle mentions as an incontestable fact that "the prodigious carrying machinery of mnemonics is much more difficult to remember than the thing itself," and he sells this system of correlations to his pupils as something incomparably superior to "mnemonics." Before proceeding to another example of Mr. Loisetle's "originality" it will be interesting to note the amount of "carrying machinery" he employs to enable his pupils to commit to memory the 209 figures expressing the ratio. It will be seen that by the aid of pure mnemonics borrowed from Fauvel-Gouraud, Mr. Loisetle has been able to translate these 209 figures into 117 words. Now to learn these 117 words the pupil has to learn by heart, or, to use Mr. Loisetle's own term, memorise thoroughly about 450 words more or less connected with each other. And these 450 words it must be recollected have to be repeated six times forward and six times backward, and an additional repetition of each extreme, involving altogether considerably over 5,000 repetitions to learn 117 words!! And then he adds "recite the 209 figures at least 20 times"! In the face of this Mr. Loisetle should be the last to write about the "prodigious carrying machinery of mnemonics."

One very useful thing mnemonics enable a person to do is to carry in the mind a calendar for any year. This is done by those professing to teach "mnemonics" by translating the dates of the Sundays into words, and associating the words to the month. Mr. Loiset, although protesting that his system is entirely different to "mnemonics," and condemning other "professors" and all their works, includes in his lessons calendars for 1884 and 1885, which are constructed in precisely the same manner as those of other mnemonists. To show how exceedingly doubtful is Mr. Loiset's claim to originality Mr. Stokes's mnemonic calendar for 1874 is placed by the side of Mr. Loiset's "Infallible Memory Almanack" for 1884:—

	STOKES—1874.	LOISETTE—1884.
<i>January</i>	Row—tide—dive—Nile	Hero taught Davy Noel
<i>February</i>	A head off a tall nun	To fee a tall Ionian
<i>March</i>	A head off a tall nun nip	Do have dull Nanny Nebo
<i>April</i>	All down stoop inch	Will Dan daub a niche
<i>May</i>	May tease a duck owner mad	My days take inner might
<i>June</i>	I go—a tear—a nod—enough	A hack tore a naughty knave
<i>July</i>	All down stoop inch	Will Dan daub a niche
<i>August</i>	A new pie dish name Miss	Now boy touch a numb mouse
<i>September</i>	Show them a nice nag	Ash Adam knows a knack
<i>October</i>	Row—tide—dive—Nile	Hero taught Davy Noel
<i>November</i>	A head off a tall nun nip	Do have dull Nanny Nebo
<i>December</i>	Show them a nice nag	Ash Adam knows a knack

In teaching his calendar Mr. Stokes thought the date of the first Sunday was sufficient, leaving the pupil to calculate from that date, and therefore coined a word suggesting both the month and the date, as "Jane!" for January 5th, "Mayor" for May 4th, &c. Mr. Loiset, however, gives no such help, the pupil has to thoroughly learn each sentence, and then has to associate or "correlate" the name of the month to the word expressing the date of the first or second Sunday. April is connected with "Adam" by the words—"April—rill—fountain—garden—Eden—Adam." May is linked to "Hero" by the words—"May—flowers—garlands—hero." Of course it is just possible that the word "fountain" may immediately recall "garden," and "garden," the word "Eden," and equally as possible that "garlands" may recall "hero"—but the fact is they *don't*. If the student attempts to recall these words by analysis, he finds that either the words connected with the one month get confused with those belonging to the other, or that they recall other more familiar ideas. The only way to guard against this is to repeat them so often that they are learnt "parrot fashion."

Every mnemonist has a device for learning the dates of the accession of the Kings and Queens of England, and so much



ingenuity has been displayed in this direction, that considerable curiosity was excited when it became known that Mr. Loiset, whose system was "totally unlike mnemonics," had successfully grappled with this mnemonic feat. Before referring to Mr. Loiset's originality of treatment in this direction, it may be remarked that the majority of mnemonists invent a sentence which contains a word indicating the numerical order of the accession, another word suggesting the name of the sovereign, and another word or words at the end of the sentence expressing the date. For instance in Middleton's "All About Mnemonics"\* the particulars relating to the ninth sovereign after the Conquest, Edward I., are expressed by the words:—"Bee—Eat—winning honey." The word "bee" represents 9, the word "Eat" is what is known as a homophone for "Edward I." and "winning honey" expresses the figures 272, or 1272, the date of accession. These words are formed into a short sentence with the word expressing the order of succession at the beginning, and the words giving the date at the end. Mr. Middleton gives the sentence "Bees eat much when winning honey." Similarly the sentence, "Mama likes a game of chess," gives the name and date of accession of the 33rd sovereign of England, George III. The same method is adopted by other successful mnemonists. It will be seen that in learning the tables of the Kings and Queens three things are essential—that is, the order of succession, the name of the sovereign, and the date of the accession. The ordinary plan of mnemonically treating these three essentials is shown above. The originality of Mr. Loiset's method may be judged when it will be seen that in applying his system to this subject he uses, in two cases out of the three, the same method as other well-known mnemonists. When Mr. Loiset first introduced his system, his method of teaching in this respect—with the exception of using words instead of a sentence—was "wholly like mnemonics." He however, discarded the use of the "croquet" table for learning serial facts, and now the system in this case is only two-thirds "like mnemonics." It will be seen from the above that the word "Eat" represented Edward I., and "Game," George III. Similar

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\*This is the title of a clever little book recently issued. To any one who desires to know anything about the subject, or who is anxious to improve the memory, I can heartily recommend it. Above all, before anyone feels inclined to spend one or five guineas over any so-called "system," I would advise him to spend *one shilling* in the purchase of this book. The purchaser will then find that he can be his own "professor," for, after a perusal, he will certainly know as much, and very probably more, than any professor of memory. This book of Mr. Middleton's is the only one I know which gives full details of *every* system, besides showing very lucidly how they can be advantageously used. I may as well admit here that I am indebted to "All About Mnemonics" for many of the apparent instances of plagiarism that are recorded here against Mr. Loiset.

words are used to represent other sovereigns. Mr. Loisetle uses similar words, which he terms "homophones," for the same purpose. Fauvel-Gouraud used the same plan. Pliny Miles did likewise, and termed these words "homophonic analogies." To give another instance of how very "original" Mr. Loisetle's system is, his list of "homophones" is given below in juxtaposition to those used for the same purpose by other mnemonists.

LOISETTE.	Other Mnemonists.	LOISETTE.	Other Mnemonists.
Wit	Wit	Hack	Hack
Wine	Wine	Hive	Have
Head	Hate	Etch	Dish
Even	Even	Merry	Merry
Hen	Hen	Bet	Lazy Pet
Reed	Red	Jet	Jet
Joiner	John	Cut	Cat
Hem	Ham	Protector	Common people
Eddy	Died	Can	Chain
Eden	Deny	June	Join
Emporium	Deem	Whim	Whim
Ruin	Ruin	Antic	Hand
Hair	Hare	Goat	Got
Hall	Hall	Gun	Gun
Hush	Hush	Game	Game
Ear	Dear	Gear	Gore
Eel	Duel	War	War
Room	Room	Victory	Victoriously

Of those credited to other mnemonists some were used by Fauvel-Gouraud in 1845, many more by Mr. Stokes at least fifteen years ago, and others will be found in Appleby's "Phonetical Memory Book" published a few years since. On comparison it will be found that about one half of Mr. Loisetle's homophones are *exactly the same* as those used by others, and that of the remainder many have a strong family likeness, and all are formed on the same identical mnemonical plan, viz:—that of using the initial to recall the sovereign's name, and the consonant to express his number. The only difference between "Eddy" and "Died" is that between "Edward" and "Ted." And yet despite all this, Mr. Loisetle goes out of his way to denounce other mnemonists, and advertises broadcast that his system is "wholly unlike mnemonics"!

Two examples of the ordinary mnemonic method are given above viz: for Edward I. and George III. Mr. Loisetle's formulas for these two kings are as follows:—"Eddy—Eddystone—stone-ware—China—Tonquin," and "Game—gamekeeper—poacher's challenge—"Do catch us'." The names of the kings are represented by "Eddy" and "Game," the word "Tonquin" expressing

1272, and "Do catch us," 1760. To remember these words the relations of each to the other by "inclusion, exclusion, and concurrence" has to be thought out, and then the whole repeated six times forwards and backwards. And after all this labour the order of succession is not learnt. Their serial (not numerical) order has to be learnt by the memorising of another list of 125 words in which the homophones are linked to each other. The homophone "Eddy" is linked with the one preceding and following by the words "HEM—backstitch—backwater—EDDY—turn—turned out—EDEN." Regarding all this trouble as a means to an end, this is another example of the worthlessness of Mr. Loiset's denunciation of the "prodigious carrying machinery of mnemonics." According to Mr. Loiset's theory (if it really be worthy of the name of a theory) the word "China" in the above example should immediately by analysis recall, "Tonquin." Now, according to the rules laid down by Mr. Loiset, and by Dr. Pick before him, ideas are recalled by their similarity, contrast, or by coexistence. If "China" is to recall "Tonquin," it must be by the third rule, and there will be very few cases indeed in which the two ideas had been thought of together previously to seeing them in these lessons. But repeat these words backwards and forwards half a dozen times and even a parrot will name the one upon mention of the other.

Another instance of Mr. Loiset's "prodigious machinery" occurs in learning the names of 106 winners of the Derby with the date. The pupils has first to connect the names of the horses together so that he may know the serial order. To do this necessitates the perfect memorising of our 400 disjointed intermediates; and after these 500 words have been repeated the necessary six times backwards and forwards, another series of about 450 additional links are used to connect the name of the horse to the date. Altogether above 1,000 words have to be learnt in their proper order, and repeated twelve times, before the pupil can be said to have thoroughly mastered this exercise.

It has already been shown how much Mr. Loiset has been indebted to Fauvel-Gouraud in the "Ratio" exercise. In Fauvel-Gouraud's fourth lesson he gives in eleven short sentences the words expressing the numbers to be learnt in performing a mnemonic feat entitled the "Knight's Tour," showing the erratic course taken by a Knight in covering the whole of the squares of a chess board. Mr. Loiset gives a list of words for performing the same feat. It is only fair to say that Mr. Loiset's method is an improvement on Fauvel-Gouraud, but he, undoubtedly, got the idea from the American mnemonist. Then why go out of the way to fling a stone at Fauvel-Gouraud, and say that everything in

mnemonics, except "the imaginative method of association," is borrowed without acknowledgment." Mr. Loisetle has changed the greater part of Fauvel-Gouraud's formula for the "Knight's Tour," but the following shows that in this exercise, as well as in others, *he* has "borrowed without acknowledgment." Fauvel-Gouraud's fifth sentence runs:—"A meek nun enough may find homage." Mr. Loisetle substitutes for this the words—"meek—nun—enough—muff—hand—machine."

It has already been shown how closely Mr. Loisetle has imitated Dr. Pick's principles and method of associating ideas; and a number of instances have been given of Mr. Loisetle's method of connecting two unfamiliar words by a series of disjointed intermediates. In the *English Mechanic*, No. 1084, an "Old Pupil" of Dr. Pick says—"Pick's method was to connect two ideas, in themselves unconnected, by some idea which had a connection with each,—e.g., to connect 'tooth' and 'friend.' You think of—tooth—toothpick—Pick—your friend. Sometimes he carried the connection through a whole series of objects; thus, to connect 'coal' and 'time'—coal—fire—chimney—chimney piece—timepiece on it—time." This seems to dispose of Mr. Loisetle utterly and completely. The only idea in his lessons which at first sight appeared novel — viz :—the correlation by intermediate words — is thus shown to have been part and parcel of the very system Mr. Loisetle deprecates and begs his pupils not to notice.

One of the greatest attractions of Mr. Loisetle's system is that offering the power of "learning the contents of any book in one reading." One would imagine that here at least would be found originality, but the instructions given do not differ very much from those given years ago by persons who claimed to teach "mnemonics." Mr. Loisetle's remarks on this subject are too long to quote fully, but the curious reader is invited to read them, and then compare them with the remarks made by Mr. Lyon Williams on page 128 of his "Science of Memory," published in 1866. The gist of Mr. Loisetle's instructions is as follows:—"Do not trouble yourself with padding or repetitions. Give your attention to the ideas which are new to you, or the new uses made of familiar ideas. These novelties of fact, opinions, illustration, &c., you correlate together thus—the title of the first chapter to the title of the book; the titles of the chapters to each other, and then in each chapter the first leading idea or proposition to the title of the chapter, the second leading idea to the first, &c." Compare this with the following quotation from Lyon Williams' book (page 130-131):—"To aid the retention of the contents of a book the chapters must be associated together by

selecting the primary or leading ideas of each, and to each of the latter, again, a few further suggestive ideas in the chapter may be joined. The number of ideas that should be selected from each chapter will depend on the nature of the subject, the degree of sequence or relationship between the parts, and the completeness with which it is desired to be remembered."

Mr. Stokes's "Post and Chain" system was very similar, only in that case the chapters and leading ideas were associated to a "key." Originally Mr. Loiset's instructions differed from those quoted above. He used a "key" or "correlator" in those days, and instead of saying "correlate together" he said "affiliate to the correlator." The above, however, proves that neither then or more latterly was Mr. Loiset's method original.

In the preceding pages the writer has desired to show and to prove that instead of this much vaunted system being original and wholly unlike mnemonics it is, on the contrary, *not* original, and the greater portion of the system is so much like what is known as mnemonics that it would be difficult to point out any difference. There are teachers of mnemonics at the present day who have devoted a life time to this subject, and whose highest ambition is to be recognised as educationists, who have done what they could to make easy the path of knowledge. *They* do not pretend that they teach anything else but "mnemonics." This word, much abused at the hands of Mr. Loiset, is used by them as meaning the "art of memory." If Mr. Loiset desires to teach an art of memory to the English people he should adopt the English plan of calling a spade a spade, and inform his pupils, before any "secret treaty" is signed, that it is mnemonics pure and simple that he teaches.



# ADDENDUM.

SINCE this pamphlet went to press Mr. Loisette has issued a new edition of his lessons with a few fresh applications of his system. In view of Mr. Loisette's great claims to originality, and his oft repeated statement that his system is "totally unlike Mnemonics," this pamphlet would be incomplete without some reference to these new exercises, which, rather unfortunately for the "Professor," only go to further prove that the difference between the Loisettian Art and Mnemonics is simply the difference between tweedledee and tweedledum.

One of these new exercises is the Multiplication Table, 13 times 2 to 13 times 24. The key used is that given on page 7 of this pamphlet, 1 being expressed by *t* or *d*; 2 by *n*; 3 by *m*; 4 by *r*, and so on. Mr. Loisette uses a word expressing 13 times 17, for instance (*mica*), and another expressing the product 221 (*noonday*). In 1867 Mr. T. A. Sayer, of the Mnemonic Institute, Ramsgate, did exactly the same thing in a little book he published, entitled "A Practical System of Mnemonics." I give in parallel columns the 13 times table of both Sayer and Loisette:—

LOISETTE.			SAYER.	
13 times	11—diadem	= drama —143	—tomtit	= drum
13 "	12—autonomy	= tillage —156	—tempting	= delicious
13 "	13—mummy	= toy shop—169	—tomb	= the ship
13 "	14—homer	= deafen —182	—tempter	= divinity
13 "	15—meal	= table —195	—tame tale	= tippie
13 "	16—match	= unsafe —208	—thumb dish	= insufficient
13 "	17—mica	= noonday—221	—dumb dog	= noonday
13 "	18—muff	= enamour—224	—tame dove	= enamoured

The only apparent difference between the two is in the association, and this difference does not really exist. Sayer would associate "tomtit" to "drum" by a mental picture. Loisette "correlates," and condemns mental picturing. To associate "mob" to "Newark" (13 times 19 = 247) the pupil has to memorise the words "mob—crowded—Noah's Ark—Newark." A little reflection will convince anyone, that, despite Loisette's condemnation of mental picturing, his pupil has really in this case to mentally picture a mob crowding Noah's Ark, the latter word being left to suggest "Newark." The idea was taught as a part of mnemonics in 1851, in a Portuguese edition of Castilho's work "Tratado de Mnemonica," and rather curiously Castilho used the same key as Loisette. His 5 times 8 runs as follows:—"Lava é rio de fogo que tudo arraza"—lava is a river of fire which everything razes—*lava* expressing 5, 8, and *razes*, 40. In the face of this, how can Loisette persist in repeating that "his system is totally unlike Mnemonics?"

Another new exercise in this new edition of Mr. Loisette's lessons is one having for its object the linking of the old names of the British Regiments to their new territorial titles. It will be seen from page 2 of this pamphlet that when Mr. Loisette first taught his system he used a key of consecutive words. This key or table he afterwards discarded, as it enabled him to advertise that he used no keys or links. For learning serial facts a consecutive table is almost indispensable, and it is not surprising to find Loisette now going back to the "keys" of the older mnemonists. To do this exercise the pupil has now to learn a key expressing 1 to 20. For purpose of comparison I give

selections from the keys of other mnemonists, which are used for similar purposes :—

LOISETTE.		OTHER MNEMONISTS.	
1—heath	11—wetted	1—tea	11—date
2—nigh	12—twine	2—noyea	12—dine
3—home	13—autumn	3—home	13—time
4—heir	14—tear	4—hair	14—dear
5—howl	15—hotel	5—oil	15—dell
6—wage	16—thatch	6—ahoe	16—diah
7—key	17—duke	7—key	17—duke
8—wave	18—tough	8—fee	18—taffy
9—bee	19—toby	9—bee	19—tabby
10—ties	20—noose	10—daisy	20—noose

The originality, it will be observed, is most ingenious !

On page 11 of this pamphlet will be found a comparison of Loisettes' Memory Almanack with that of Stokes'. In this new edition, Mr. Loisettes advances a step. It would be tedious to follow the plan of other mnemonists and "invent" an almanack for each year, so in this edition, last year's almanack is made to do duty for this year by allowing what applied to the first Sundays in last year to apply to the first Saturdays in this ! This I hasten to confess, is the one original idea I have found in Mr. Loisettes' system, and I give him every credit for the happy thought. This inspiration, however, seems to have exhausted his stock of originality, and he goes on to borrow largely from other mnemonists. Reventlow (whom Loisettes now goes out of his way to abuse, and whose system he condemns) expressed the month by figures, as follows :—March by *r*—4; April by *p*—9; May by *m*—3; August by *g*—7; and so on. Fauvel-Gouraud did very much the same thing—March being represented by *m*—34; April by *p*—94; May by *m*—33; and August by *g*—70. Loisettes's month symbols are exactly the same as Fauvel-Gouraud's, and he uses them in exactly the same manner. To remember that Mary reigned six years from the 6th July, 1533, the awkward sentence—"a tall elm-hedge less shows age" has to be perfectly memorised. To denote that Raphael was born 8th March, 1520, Reventlow used the sentence "Ruhingekrönter Sanzio,"—the first two consonants expressing March 8, and the last three 520. Aimé Paris (another dead and buried mnemonist much abused by Loisettes) used a similar plan. Another example or two of originality in this respect may be given. Loisettes's memory calendar for 1884 has already been referred to. In 1885, Mr. Middleton gave in "All About Mnemonics" a sentence containing twelve mnemonical consonants expressing the first Sundays in their proper order, to be used as a calendar for 1886. The sentence was as follows :—"My coke—range—readily—may glow." In 1886, Mr. Loisettes gives the same idea worked out to suit the first Saturdays, as follows :—"No judge may delay my garnisher." Strange, is it not, that one who teaches a system "wholly unlike mnemonics," should go to a handbook on "mnemonics" for ideas ? Another example—on page 19 of my "Phonetical Memory Book" I give the following key to enable any one to tell the day of the week any day will fall on in any year :—January, 3; February, 6; March, 6; April, 2; May, 4; June, 0; July, 2; August, 5; September, 1; October, 3; November, 6; December, 1. These dates were expressed by words, and the rule was given for calculating the dates. On page 5 of Loisettes's "Gordian Knot" Lesson, the rule is given, in slightly different language; the figure key is exactly the same, and even one of my examples is copied almost word for word. The example is as follows :—

#### APPLEBY.

Required the day of week for June 18, 1815, date of Battle of Waterloo.  
7)1815(2 and 1 over; 4)1815(8 and 8 over (not required); then 1 added to 3 = 4, add day of week, 18 = 22, added to key number for June, which is 0, gives 22, and this divided by 7 gives 3 and 1 over, which is Sunday, the answer required.

#### LOISETTE.

On what day was the 18th of June, 1815, the date of the Battle of Waterloo !  
Quotient of 15 by 4 = 3; remainder of 15 by 7 = 1; number of the date 18; addendum for June = 0: Total = 22, which divided by 7 leaves 1. Answer, first day, i.e., Sunday.

The rule itself was published many years ago, but I was the first to include it in a work on mnemonics, and it will be seen from above that in this respect, as in many others, Mr. Loisetle is merely a copyist.

Reference is made on page 2 of this pamphlet to Mr. Loisetle's laws of recollective analysis and their resemblance to those of Pick. Aristotle, in his treatise on Memory, enumerates three laws of mental resuscitation, viz., "similarity, contrariety, and coadjacency." Does this not suggest Mr. Loisetle's three laws of recollective analysis— inclusion, exclusion, and concurrence? If a close comparison is made there will be found to be many remarkable points of resemblance.

In his latest edition of his lessons Mr. Loisetle devotes a good deal of space to the denunciation of Reventlow's system. Since this pamphlet was printed I have taken the pains to compare Reventlow with Loisetle. Reventlow's book was published in Stuttgart in 1843; Loisetle's in London in 1886; but had the facts been reversed I should have said that Reventlow had pirated Loisetle, and richly deserved all the abuse showered upon him—so closely does the one resemble the other. Let the reader judge. Loisetle's present method of learning 100 conundrums is to connect a prompting word in one to a prompting word in the next. Reventlow gave rules to be applied to pieces of poetry, anecdotes, &c. This rule was to associate by what he termed a "medium." (Loisetle's term for this is "correlation") a prompting word at the end of one verse or anecdote to another prompting word at the beginning of the second—very similar in fact to Loisetle's method. On page 6 is shown Mr. Loisetle's method of associating a person's characteristic with the person's name. Mr. Loisetle gives the rule as follows:—"To remember proper names, correlate the person's name to the name of some peculiarity of the person as the *best known*, and which you are sure to think of whenever you think of the person." Compare this with Reventlow's rule for "association of the name with the person":—"You will give your attention to the moral impression which the person you meet makes on you in relation to the physiognomy, the deportment, and his whole manner; or you will compare him to another person, or you will look somewhere for some physical sign, which you will connect with the name of the person." After perusing these two rules the reader is left to draw his own conclusion. There are a few other matters in Reventlow's book very suggestive of Loisetle, but space will not permit further examples.

Reference has already been made to Castilho, and his Portuguese work. His system was published in French in 1831, and among its contents is the "Ratio" exercise, the "Knight's Tour," and a "Whist Memory." Not of course Loisetle's Whist Memory, for Castilho probably never even heard of the name of Loisetle. Still the comparison is most interesting. It may be mentioned that Mr. Loisetle published his Whist Memory both in English and French. I have not sufficient space to give the English edition, but as Castilho gave his in French, its comparison with that of Loisetle in French will enable the reader to judge of the latter's originality.

The order of the cards were expressed by articulations, as follows:—

	1	2	3	4	5	6	7	8	9	10	Jk.	Qn.	Kg.
CASILHO	a	de	t	k	cein	si	se	h	n	dis	v	d	r
LOISETTE	a	d	tr	ca or q	cein or quin	si	se	h	n	di	v	ra	ro

The colour of the cards were represented thus:—

CASILHO—Diamonds K; Hearts EUR; Spades P; Clubs T.

LOISETTE—Diamonds K; Hearts R; Spades P; Clubs T.

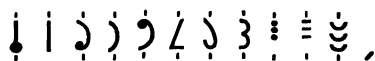


Each card will therefore be represented by a word showing in its beginning its number, and in its ending its colour. The list of words is as follows .—

DIAMONDS		HEARTS		SPADES		CLUBS	
CASTILHO	LOISETTE	CASTILHO	LOISETTE	CASTILHO	LOISETTE	CASTILHO	LOISETTE
1 accroc	acquitt	assureur	arche	aspic	apôtre	astre	atre
2 decade	ducat	demeure	dard	depit	depot	deteur	detroit
3 tic	trique	terreur	tarare	tape	trepied	traître	treteau
4 cacao	cacao	cœur	quart	cape	caporal	quatrein	Caton
5 5 quarts	quinquet	5 heures	St Remy	simple	Simplon	ceintre	ceinture
6 cyclope	sicile	scieur	sirop	cyprès	sciplon	citron	Cythère
7 sec	secateur	seigneur	serenade	cep	sepia	sceptre	seton
8 hoquet	hoquet	hurleur	heron	huppe	huppe	huitre	hutte
9 nuque	nuque	nageur	neron	rappe	rappe	neutre	natte
10 disque	digue	discoureur	diorama	dispute	Dieppe	distrait	diète
Jk vacarme	vicomte	valeur	verre	vampire	vapeur	ventre	vêtement
Qa d'accord	rack	danseur	rare	d'api	rape	dartre	rateau
Kg roc	roc	railleur	ronron	rape	Europe	retour	rôté

The above and preceding examples will suffice to show that Mr. Loiset's system is neither original or different from what has been known for centuries as "mnemonics." Of course Mr. Loiset publishes testimonials to the effect that his system is what it professes to be; but the value of these can only be properly ascertained by knowing how many of the writers have properly studied mnemonics, or know anything about the subject; and how far they are interested in supporting Mr. Loiset's views. Obviously if any of these individuals who offer themselves as evidence are or have been employed in his service, or have received gratuitous lessons, or are connected with the agencies through which Mr. Loiset advertises so extensively, it would not a little detract from the weight of their testimony. In this pamphlet the evidence is, as it were, tabulated, and the public can pronounce their own verdict.

# Universal Phonography.



AN ATTEMPT  
TO SELECT AND CLASSIFY  
THE PRINCIPAL SOUNDS OF HUMAN SPEECH  
AND  
TO DENOTE THEM BY ONE SET OF SYMBOLS  
FOR EASY WRITING AND PRINTING.

WITH AN APPENDIX  
ON THE USE OF PHONOGRAPHY FOR THE BLIND.

BY  
WILLIAM BENSON,  
AUTHOR OF "PRINCIPLES OF THE SCIENCE OF COLOUR,"  
AND "MANUAL OF THE SCIENCE OF COLOUR."

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01-15-29 LWB



## INTRODUCTION.

NEXT to the art of speaking, the most excellent of all arts are those of writing and reading, by which we record and communicate our knowledge for the use of future times and other people. All improvements in means so necessary as these to the progress of mankind deserve our regard and attention, and every endeavour to promote them has at least a worthy object. I would plead this in justification of the pains I have taken to elaborate and simplify the phonographic system suggested in the following essay. It may be thought by some that the advantages claimed for Phonography, could it be established, would be no equivalent for the inconveniences of change, and that the adoption of any new system of writing by any nation, much more its universal adoption, is quite a chimerical idea. But why so? Surely the nations will not always consent to be hampered with needless difficulties in reading and writing the words of their own languages and learning the tongues of neighbouring nations, when the whole human race is daily becoming more closely united and more intimately mixed. We need not speculate whether in distant ages the various languages of mankind will ever be blended together, or superseded by one; but it may be safely asserted that long before any such change as that comes to pass, even in the civilized world, the common sounds of which languages consist will be indicated by some common set of symbols. Greater changes than this have taken place in the ages that are past, and the children of future generations will not move on so slowly as their fathers moved before them. When once a really good phonetic system of writing has come into use in any single nation, its immense advantages (we may safely say) will procure its early extension; and its general adoption is as sure to follow at last, as day to follow the dawn.

It should be remembered that none of the Alphabets now

in use have been constructed on a scientific basis. Their characters for the most part have been abbreviated and simplified from hieroglyphics and other complicated forms, down to the still multifarious though much more convenient forms of the present day. And may we not expect that the tendency to save time and trouble which has been so long in action, will yet proceed further, and lead to the application of scientific principles to render those arts of writing and reading as easy and uniform as possible? Is it not likely, indeed, that in an age when every branch of knowledge has been revolutionized, the time will soon come for some radical practical improvement in this direction also?

Repeated attempts have been made, with great ingenuity, to lessen the defects and ameliorate the faults of our present spelling, without quite abandoning the interesting and widely known alphabet which has come down to us from the very childhood of civilization. But it is evidently impossible by any such alterations and additions to attain to anything like perfection; and the very amendments have too much the appearance of patches on an ancient robe. They mar the beauty and uniform consistency which the polish of ages has given to the characters we use in writing and printing, till they have become perhaps the best-looking set of symbols that the world has ever produced. It would really seem easier for a new, complete, and logically correct phonetic system to make its way, and finally to supersede the various imperfect and troublesome alphabets now in use throughout the world, than for any unsatisfactory compromise to be finally accepted. At any rate it seems desirable that efforts should be made to devise the best method of denoting the sounds of our own and all other languages, were it only to induce people to consider whether the advantages offered by it, beyond all that could be derived from imperfect reforms, do not vastly outweigh the objections and difficulties that would attend its introduction.

Of course a system worthy of universal acceptance could only be formed and brought into use by the intelligence and skill of many earnest reformers in different nations. Each original suggestion would have to be moulded and perfected

by the advice and criticism of many thinkers and workers before it could meet with general approval; and then to make known the new system, and overcome the prejudice in favour of the old, would require the co-operation of multitudes for many succeeding generations. How nations cling to their ancient letter-forms may be seen from the Germans still retaining indistinct and complicated forms both in manuscript and in print, in preference to the far simpler and more legible forms of the Roman and Italic letters; yet that people have amended their spelling by giving a tolerably uniform value to each letter—a feat which neither we nor the French can boast of. But till some venturesome spirits are moved to point to the more glorious goal, the best method of notation for all languages, and try to find out how to reach it, and even make some serious attempts to initiate the arduous enterprise, what possibility is there of any approach? Like some magnificent mountain chain, it may lie before us in distant prospect; but where are the pioneers to clear the jungle, to bridge the rivers, to level the rocks, and make a convenient passage step by step through the wide intervening tract?

Professor Max Müller, in his admirable lecture on “The Physiological Alphabet” (*Science of Language*, vol. ii.), speaking of the valuable labours of some who for twenty years had sought to turn the results of scientific research to practical use “in devising and propagating a New System of Brief Writing and True Spelling,” says, “I am far from underrating the difficulties that stand in the way of such a reform, . . . but I feel convinced of the truth and reasonableness of the principles on which that reform rests: and as the innate regard for truth and reason, however dormant or timid at times, has always been irresistible in the end, enabling men to part with all they hold most dear and sacred, whether corn-laws, or Stuart-dynasties, or Papal legates, or heathen idols, I doubt not but that the effete and corrupt orthography will follow in their train. Nations have, before now, changed their numerical figures, their letters, their chronology, their weights and measures; and though Mr. Pitman may not live to see the results of his persevering and disinterested exer-



tions, it requires no prophetic power to perceive that what at present is pooh-poohed by the many will make its way in the end, unless met by arguments stronger than those hitherto levelled at the '*Fonetic Nus.*' One argument which might be supposed to weigh with the student of language, namely, the obscuration of the etymological structure of words, I cannot consider as very formidable. The pronunciation of languages changes according to fixed laws: the spelling has changed in the most arbitrary manner: so that if our spelling followed strictly and unswervingly our pronunciation of words, it would in reality be of greater help to the critical student of language than the present uncertain and unscientific mode of writing."

The reform advocated in the present essay goes far beyond that which the learned professor refers to in the above quotation; yet I may claim his argument as still more appropriate to it, because simple and logically devised symbols would still more effectively promote the important objects of "Brief Writing and True Spelling." It would also tend much more to lighten the labours of learners and teachers, to the saving of invaluable time now required for education both in native and foreign languages.

Nor is time and money all that would be saved, could we quite clear off the hamper of our false way of writing. Think of the serious mischief which it causes to children that have brains and are naturally eager to use them! Instead of having their mental faculties improved in learning what ought to be the most beautiful and perfect of arts, they are doomed when they first go to school to months and years of a dreary monotonous negation of common sense, and rather thwarted than helped in that exercise of their thinking powers, which is one great delight of the years of physical and mental growth. Our very alphabet, with its odd names and inconsequential structure, its superfluities and defects, is bad enough, but this is nothing to the bad use we make of it. As soon as a bright child gets a glimpse of its purpose, and tries to apply it correctly, he is met with reproof and contradiction, and is discouraged and displeased with his lesson. He finds it is better not to think, or to seek for a rule, but plods through

the wearisome task of learning the incongruous spelling of thousands of words, for which he can see no reason. The loss and mischief is irreparable in future life.

But I hope to show that several other useful objects may also be effectively promoted by means of this kind, such as facilities in typography, and in hand-writing, with increased legibility in both, and a saving of space, besides the opening of a reasonable prospect of the ultimate accomplishment of what would be an incalculable benefit to the human race, a common Alphabet—the same symbols for the same sounds in every language. Our great Bible and Missionary Societies would do well to agree to adopt such a system at once for all their publications in languages which have no letters of their own.

One collateral advantage of a really good and simple phonetic system deserves particular mention. It might lead to an improvement in the best of the methods hitherto practised for enabling the blind to write and read: and in the hope that this point may be favourably considered by the Royal Commission on the Education of the Blind and Deaf, I have added to this essay (which was written for the most part more than six years ago) some detailed suggestions for applying improved phonetic principles in methods that might enable the sightless to read with the fingers more readily and quickly, and would greatly facilitate the learning of the various symbols for sounds and numbers by teachers and pupils alike.

Irrespective, however, of all practical results, the study of the simple sounds which the human organs of speech are capable of making is in itself extremely interesting and improving. To enter into physical and physiological researches, and discuss the nature and cause of the complex vibrations of vocal and whispered speech, is not at all within the compass of this essay, which is merely the simplest and best enumeration and classification of the essential vowel and consonant sounds, and the most advantageous way of denoting them for practical use. But this comparatively easy study will well repay the little pains required to master it, and surprise those to whom it is new by its own inherent beauty.

## PART I.

### THE ELEMENTARY SOUNDS OF LANGUAGE.

THE first step towards devising a system of writing for use in all Languages is, of course, the determination of the elementary sounds for which distinctive marks should be provided. Such a system should obviously include all the essentially distinct sounds that are of real use in the languages of civilized nations, omitting any clicks, twangs or intonations peculiar to the tongues of savage tribes, or unimportant dialects that have no literature of their own ; for these would encumber it with a practically useless complication, which would be a greater evil than theoretical incompleteness without them.

The next step is to arrange these selected elementary sounds in the simplest manner, according to their nature and the way in which they are produced by the vocal organs, not only that the complete series may be better remembered, but that the symbols or marks by which they are to be represented may have some distinctions between themselves corresponding with the distinctions of the sounds, and some likenesses analogous to the likenesses of the sounds, to facilitate the mental association of the sounds and marks. So the system would be more easily learnt, more effectively retained, more correctly applied in practice, and freer from the danger of capricious change in lapse of time, than would be possible with any set of heterogeneous marks chosen at hap-hazard to represent a number of sounds succeeding each other without any regard to order, as in all existing alphabets.

A careful analysis of the alphabets of the principal languages, and of the consonant and vowel sounds used in those languages (setting aside the letters that stand for compound sounds, and not noticing for the present the distinction arising from hard or soft pronunciation) seems to lead to the conclusion that the happy mean between too many and too few gives us fifteen distinct consonant sounds, and the same

number of distinct vowels. These (by a little modification of the generally accepted classifications and nomenclatures) may, for the present purpose, be usefully arranged in groups, which may be distinguished by simple names expressive of the nature of the sounds they consist of.

The consonants may thus be divided into

Three BURSTS :	Three PUFFS :	Three HUMS :
Two WHISTLES :	Two HISSES :	Two TRILLS.

The vowels into

Five PHARYNGALS : Five ORALS : Five DIPHTHONGS.

And all these groups (except perhaps the Hums) admit of a hard (sometimes called sharp, rough, or aspirated) pronunciation, as well as the common soft pronunciation.

The actual sounds which belong to each of the above groups are detailed in the following lists in a compendious form, which might serve as a sort of *memoria technica* to learners.

Of consonant sounds

The Bursts are Be, De, Ge<sup>1</sup> ;  
Or hardened, Pe, Te, Ke :

The Puffs are, Ve, The, Ghe<sup>2</sup> ;  
Or hardened, Fe, The,<sup>3</sup> Khe<sup>3</sup> :

The Hums are, Em, En, Eng :

The Whistles, We and Ye,  
Or hardened, Whe and Yhe<sup>4</sup> :

The Hisses, Ze and Zhe,<sup>5</sup>  
Or hardened, Se and She :

The Trills are Re and Le,  
Or hardened, Rhe and Lle.<sup>6</sup>

<sup>1</sup> As in *get*, *go*.

<sup>2</sup> Not now used in English, but found in some Scotch, Welsh, and Irish words, and common in German, being the sound of the final *g* in *pfennig*, and *ch* in *ich*.

<sup>3</sup> The difference between the soft and hard *the* may be seen by comparing the words *thy* and *thigh*.

<sup>4</sup> The difference between the soft and hard Whistles may be seen by comparing the words *wet* and *whet*, *yew* and *hew*.

<sup>5</sup> As the *s* in *measure*, or the *z* in *azure*, and the letter *j* in French words.

<sup>6</sup> As the double *ll* in Welsh words.

## Of vowel sounds

The Pharyngals in Et, At, Aht, Ot, Ut, are heard ;  
 The like, with longer sound, in Air, Ant, Art, Ort, Urt.

The Orals, short or long, in Feel, Fill, Tulle, Full, Fool.

Three Diphthongs, made with *ee*, in Ale, Aisle, Oil ;  
 Two others, made with *oo*, in Owl and Ole.

These, too, the hard pronunciation show,  
 As when we say Aha ! It hit, O ho !

The peculiarities that distinguish these groups, and the ways in which the several sounds belonging to each of them are produced, have been pointed out more or less fully in many grammars and works on phonology. The following short remarks, nevertheless, may be useful here for readers who have not studied the subject before.

The Bursts (which have been usually called Checks, Stops, or Explodents) are made by the sudden opening of a stop previously formed in some part of the mouth against the passage of the breath. They may be called Labial, Medial, or Guttural, according as the stop was formed by closing the lips, or by causing the tip of the tongue to touch the inside of the gum of the upper jaw, or by causing the back part of the tongue to touch the soft palate, just above the throat ; the term Medial merely implying that the position of the second stop is between the lip and the throat.

The Puffs (sometimes called Spirants, Fricatives, or Continuants) are made by the breath rushing through a narrow passage left in one of the places where a stop might be formed for a Burst. They therefore correspond in number and character with the Bursts, and are Labial, Medial, or Guttural.

The Hums (or Nasals) are made by allowing the breath to escape slowly through the nostrils, whilst a stop is maintained in one or other of the same three places in which it is made for the Bursts. They are therefore like the others, Labial, Medial, or Guttural.

The Whistles are made by forcing the breath through a narrow passage more extended in length than is required for the Puffs. The first is produced between the inner parts

of the lips when rather protruded, the second between the upper surface of the tongue and the whole soft palate from the throat inwards. So the one may be regarded as a back or inner Labial, the other as a front or outer Guttural. An intermediate Whistle may also be made, but hardly seems to be used in language.

The Hisses are distinguished by their peculiar shrillness, to produce which the passage for the breath is narrowed to a groove on the upper surface of the tongue, near the tip and against the inside of the teeth for the first, and a little further back and against the front part of the palate for the second. They may therefore be called outer and inner Medials.

In the first Trill the breath vibrates more or less strongly the tip of the tongue, brought near to the upper gum ; in the other it is reflected from the inside of the cheeks. These sounds have a certain affinity, which has led to their being sometimes interchanged.

The first group of vowels it is proposed to term Pharyngals, because they sound forth from the cavity called the Pharynx, which lies at the back of the mouth, and opens into the nasal cavity at the top and into the gullet below, and communicates in front with the mouth, and also through the valve of the glottis and larynx with the windpipe. All these Pharyngal vowels are best uttered with the mouth quite open, and require for their distinct pronunciation little or no movement of its parts. It is remarkable that in each different language some of them are rare, others frequent ; some usually long, others short. In English, for instance, the first is seldom long, except in certain words before *r*, as in *air*, *care*, *there*, *prayer* : the second also is seldom long, except in certain provincialisms for such words as *calf*, *grass*, where in standard English the third would be used : but the third is almost always long, though in the Scotch dialect it is used short in such words as *man*, *gas*, *sad*, where, in standard English, the second would be used.

The next group of vowels it is proposed to call Orals, because they each require for their pronunciation a peculiar

modification of the mouth. The vowel *ee* is made by contracting the passage of the breath in the back of the mouth, in the same place (but not so closely) as when the consonant *y* is pronounced. The vowel *oo* is made by contracting the passage at the lips, in the same place (but not so closely) as when the consonant *w* is pronounced. If the passage is too close, these simple vowels glide into *y* and *w*. The other Oral vowels are made by contracting the passage in intermediate places. With respect to this group of vowels, as well as the preceding, the various usage of different languages is remarkable. In English, for example, the first (*ee*) is almost always long, though often short in French, as in *il*. The second (our *i* in *fill*), on the other hand, is hardly ever pronounced long in English. The third Oral seems not to be used at all in standard English, though sometimes denoted by *ui* in Scotch words, as in the name *Muir*, and very common in some other languages, as in French and German, where it is indicated by *u* and *ü* respectively. It may be noticed too that the first Oral vowel has most resemblance to the first Pharyngal, and most easily combines with it; whilst the last Oral is, in like manner, most nearly related to the last Pharyngal.

Diphthongs may be formed by adding any of the Oral vowels to any of the Pharyngals, the sound changing from that of the Pharyngal to that of the Oral so quickly that the two seem to coalesce; unless an attempt be made to prolong the pronunciation of the Diphthong, when the component vowels are apt to betray themselves. The five Diphthongs specified above, however, seem to be all that are practically required in English and other languages.

The first (denoted in English by *a* in *ale*, by *ai* in *sail*, by *ao* in *gaol*, by *au* in *gauge*, by *ei* in *eight*, by *ay* in *say*, and by *ey* in *prey*) is compounded of the first Pharyngal and the first Oral.

The second (denoted by *i* in *isle*, by *ai* in *aisle*, by *aye* in *aye*, by *eye* in *eye*, by *ye* in *lye*, by *uy* in *buy*, by *y* in *sly*, by *ie* in *lie*, and by *ei* in *height*) is compounded of the third Pharyngal and the first Oral.

The third (denoted by *oi* in *oil* and by *oy* in *boy*) is compounded of the fourth Pharyngal and the first Oral.

The fourth (denoted in English by *ou* in *out*, and by *ow* in *how*, but in German by *au*) is compounded of the third Pharyngal and the last Oral.

The fifth (denoted in English by *o* in *hole*, by *oa* in *oat*, by *oe* in *toe*, by *oo* in *brooch*, by *ou* in *soul*, by *owe* in *owe*, by *ew* in *sew*, and by *ow* in *show*, but in French by *au*) is compounded of the fourth Pharyngal and the last Oral.<sup>1</sup>

Particular notice should be taken of the distinction between the soft and hard pronunciations of the various consonant and vowel sounds, and how it is effected in different cases ; especially as the analogy between the hard consonants and the hard or aspirated vowels has not hitherto been regarded as it ought to have been.

In the case of the three Bursts the hard pronunciation has been ascertained to be produced simply by an unconscious momentary closing of the glottis, or vocal valve in the larynx, so as to cause a stronger and more sudden rush of the breath through it at the instant it opens.

In the case of the Puffs, Whistles, Hisses and Trills, all which are, or may be, continuous sounds, and not necessarily momentary like the Bursts, the hard pronunciation requires more than the mere preliminary closing of the vocal valve. It requires that when that valve opens for the exit of the breath, it should open so that the vocal chords cannot be thrown into vibration. This appears from the fact (noticed by several writers) that when any of these continuing consonant sounds are made with the hard pronunciation, no vocal vibration can be produced in the larynx, though this can easily be done when the same sounds are made soft. The continuing sound *vvv*, for instance, can be uttered with a loud voice, while *fff* can only be uttered in a whisper. So also with *zzz* and *sss*, or any other pair of soft and hard continuing consonants.<sup>2</sup> But even this is not all ; for any one can easily

<sup>1</sup> The variety of ways in which these five Diphthongs are denoted in English may serve as an example of the utter confusion that pervades our notation of the vowel sounds in general.

<sup>2</sup> Except perhaps *r* and *rh*.



perceive that in pronouncing a hard continuant, the narrow passage made in the mouth for the exit of the breath is more constricted than it is in uttering the corresponding soft sound, and the pressure put upon the breath is proportionably stronger.

With vowels there is a further difference ; for though a hard vowel lends itself more readily than the soft to a whispered utterance, and requires a little more exertion in the loud utterance (not only at the inception but during the continuance of the sound, if its character of hardness is maintained), yet there is never any difficulty in giving it that vocalisation which cannot accompany a hard consonant. In fact, after the preliminary momentary closing of the vocal valve, every gradation may be made between the softest and hardest (or most aspirated) utterance of a vowel sound, whether voiced or whispered, by regulating the pressure on the escaping breath.

The variations that may be made in the nature or quality of simple vowel sounds are also endless. Probably continuous gradations of sounds may be uttered between any two of them, for their differences undoubtedly arise from the superposition in different degrees of intensity of various musical vibrations in the vocal chords, and also from alterations in the form of the resonant cavities of the throat and mouth, both of which conditions are variable at will. Hence we can no more limit the variations of vowels in kind, than we can in hardness, in length, in loudness, or in pitch. The flexibility of the marvellous musical instrument with which we are endowed is only matched by the exquisite sensibility of the ear, in so easily distinguishing and recognizing the innumerable varieties of sound we produce. For the purpose in hand it is necessary that a moderate but sufficient number of those sounds should be chosen for representation by visible symbols : and the question is whether those above detailed constitute a good selection.

The selected consonant sounds may be arranged symmetrically, as in the following table, where those that stand in the same horizontal line are of similar kind, and those that stand

in the same vertical line are made in the same part of the mouth.

GROUP.	LABIALS.		MEDIALS.			GUTTURALS.	
	Outer.	Inner.	Outer.	Mean.	Inner.	Outer.	Inner.
Bursts..... { Soft ...	Be	...	...	De	...	...	Ge
{ Hard..	Pe	...	...	Te	...	...	Ke
Puffs ..... { Soft ...	Ve	...	..	The	...	...	Ghe
{ Hard..	Fe	...	...	The	...	...	Khe
Hums .....	Em	...	...	En	...	...	Eng
Whistles... { Soft ...	...	We	...	...	...	Ye	...
{ Hard..	...	Whe	...	...	...	Yhe	...
Hisses ... { Soft ...	...	...	Ze	...	Zhe	...	...
{ Hard..	...	...	Se	...	She	...	...
Trills. { 1 { Soft ..	...	...	...	Re	...	...	...
	Hard ..	...	...	Rhe	...	...	...
	2 { Soft ..	...	...	Le	...	...	...
	Hard..	...	...	Lie	...	...	...

The Oral vowels which require, like the consonants, certain modifications of the mouth, admit of the like classification. They are therefore put first in the following table. The Pharyngals come next, in the order of their resemblance to the Orals above them: then the Diphthongs, in two lines, in the order of their component Pharyngals.

GROUP.	Labial.	Outer Medial.	Medial	Inner Medial.	Guttural.
Orals . ....as in	fool	full	tulle	fill	feel
	Lowermost.	Lower Medial.	Medial.	Upper Medial.	Uppermost.
Pharyngals..as in {	ut urt	ot ort	aht art	at ant	et air
Diphthongs { with oo	...	ole	owl	...	...
{ as in	...	oil	aisle	...	ale
{ with ee	...				
{ as in	...				

The use of presenting, as in these tables, a general view of the affinities of these different consonant and vowel sounds, will be seen when the best method of notation for them is studied : because it is important that their symbols should exhibit, as nearly as possible, corresponding affinities.

A question may be raised whether the indistinct murmur of a vowel which is heard when the consonant *l* follows another consonant (as in *apple*, *raffle*) and when *r* follows certain vowels (as in *air*, *our*) and in some other cases (as with a final *m* in *schism*), should not have a definite place among the selected speech-sounds. But as it almost inevitably accompanies the pronunciation of the consonant in such cases, and does not necessarily constitute a separate syllable, it can hardly be said to require a symbol to denote it.

## PART II.

### THE NOTATION OF THE ELEMENTARY SOUNDS.

Assuming that our lists of consonants and vowels are sufficiently correct and complete, we now pass on to the great object of phonography, the best method of representing sounds by such marks as may admit of being both written by hand, and printed from types, with the greatest possible distinctness and ease.

Many different sets of marks may of course be devised for this purpose ; but of all those which have occurred to me, after much consideration and repeated trials, the subjoined commends itself as simplest, clearest, and most easily learnt and remembered.

In this system it will be seen that the consonant marks are all of the same height, and begin and end on the same vertical line. Straight lines represent the Bursts ; curves with their convex side to the right (as if blown forwards) represent the Puffs ; the same reversed represent the Hums, to produce which the breath passes round by the nostrils. The Whistles Hisses and Trills, too, have their peculiar kinds of marks. The Labials are distinguished by giving them a preponderance by knobs or otherwise at the foot : the Gutturals by a similar preponderance at the top ; while all the pure Medials have both ends alike.

The vowel marks, on the other hand, are disposed horizontally. Those that stand for Pharyngals are mere dots ; those for Orals are short lines ; those for Diphthongs are small segments, whose ends point upwards or downwards, according as the Diphthong is formed with the Oral represented by a line in the uppermost or the lowermost place. According to the rule employed in the case of consonants, the labial Oral is placed at the base, the Guttural at the top ; and the marks for Pharyngals and Diphthongs are placed according to their resemblance to the Orals. Thus it has been

attempted to make these as well as the consonant marks, as far as possible, tell their own story.

The consonants are proposed to be denoted as follows, the hard consonants being distinguished by a small vertical line as an accent at the top :—

<i>Bursts.</i>	<i>Puffs.</i>	<i>Hums.</i>	<i>Whistles.</i>	<i>Hisses.</i>	<i>Trills.</i>
B D G	V Th Gh	M N Ng	W Y	Z Zh	R L
↓ ↓ ↓	↓ ↓ ↓	↓ ↓ ↓	↓ ↓	↓ ↓	↓ ↓
P T K	F Th Kh		Wh Yh	S Sh	Rh Lh
↓ ↓ ↓	↓ ↓ ↓		↓ ↓	↓ ↓	↓ ↓

The vowels, soft and hard, are proposed to be denoted as follows (a consonant symbol being used after each to show more clearly the position of the vowel mark) :—

*Pharyngals.**Orals.**Diphthongs.*

(Short and long, soft and hard) as in

et at aht ot ut	feel fill tulle full fool	ale aise oil owl ole
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The use of dots and short lines for vowels renders it necessary to introduce some distinct kind of marks for stops, also to indicate elision at the beginning middle or end of a word, the omission of words, and quotations. The following have the merit of extreme simplicity. A consonant symbol is used with each as before to indicate the position of the mark.

,	;	:	.	!	?	Elision.	Omission of words.	Quotation.
↓	↓	↓	↓	↓	↓	↓	↓	↓

To mark the syllable on which stress is to be laid, the grave accent (sloping the contrary way to these marks) might be used.

For the hyphen two short horizontal lines might be used, which would be distinct from the vowel marks.

The usual marks for parentheses and brackets, and also asterisks, are equally adapted for use in this and the common notation. So also are the ten cyphers.

For typography several advantages are presented by this system. One of these is the greater simplicity and more general equality in width of the characters, and the absence of any inconveniently wide character, as our *m* and *w*. Another is that no less than thirteen of the types could be used inverted, so standing for twenty-six of the soft consonant or vowel characters. Besides this, the types required for the hard consonants and vowels may all be converted into types for the corresponding soft consonants and vowels by removing the accent; which would frequently enable compositors to proceed without waiting for small fresh supplies of type. A further facility would result from being enabled to form, if needful, with one kind of type, all the requisite stops and marks of elision and quotation.

The subjoined example of typography under the proposed system will show that it would be more legible than Roman type of similar size, and would occupy less space. It will be seen that with types more neatly and uniformly cut a much more clear and beautiful result might have been attained; and that the knobs to the labial and guttural consonants should have been larger.

No peculiar forms for initials, capitals, or other modifications of type have been provided; but it is obvious that such might easily be devised without deviating from the essentials of the characters. Neither are any contractions or compound letters employed (though in practice many might be convenient), except the following for the common phonetic compounds *dz*, *ts*, *zd*, *st*, *dzh* (equal to *g* and *j* and *dg* in *George* and *judge*) and *tsh* (equal to *ch* and *tch* in *church* and *catch*); also *zhd* and *sht* :—

dz	ts	dzh	tsh	zd	st	zhd	sht
b	ḅ	p	p̣	d	ḍ	q	q̣

ע..31 1-1.7' "1-1-1-1"

1..3 1-1-1-1

1-1 1-1-1-1 1-1 1-1-1-1

1-1 1-1 1-1 1-1 1-1 1-1 1-1 1-1

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Lord Bacon's "Antitheta."

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For Innovation.

Every remedy is an innovation.

He who will not apply new remedies must expect new diseases.

Time is the greatest innovator, and why may we not imitate him?

Ancient precedents are unsuitable, and late ones corrupt and degenerate.

Let the ignorant square their actions by example.

As they who first derive honour to their family are commonly more worthy than those who succeed them, so innovations generally excel imitations.

An obstinate adherence to custom is as turbulent a thing as innovation.

Since things of their own course change for the worse, if they are not by prudence altered for the better, what end can there be of the ill?

The slaves of custom are the sport of time.



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"ᐱᐱ ᐱᐱᐱᐱᐱ ᐱᐱ ᐱᐱᐱᐱᐱ ᐱᐱᐱᐱᐱᐱᐱ")

### Against Innovation.

New births are deformed things.

No author is accepted till time has authorized him.

All novelty is injury, for it defaces the present state of things.

Things authorized by custom if not excellent are yet comfortable, and sort well together.

What innovator follows the example of time, which insinuates new things so quietly as to be almost imperceptible?

Things that happen unexpected are less agreeable to those they benefit, and more afflicting to those they injure.

---

(From Shaw's translation of the treatise  
"De dignitate et augmentis scientiarum")

[In the Phonographic type the Latin words are rendered according to their continental pronunciation.]



For handwriting the system has the advantage of very simple forms, so as to admit in practice of great saving of time and space in comparison with our present system. The consonant characters, written either upright or with the usual slope, could of course be joined by light up-strokes to form a running hand with other consonants and with the vowels: or the vowels, especially those indicated by dots, might be put in afterwards as found convenient. But simple characters like these would be better, as a rule, written separately. Anyway the time and space required for writing would be less on this system than with our usual running hand, and the legibility ought to be greater.

In writing it would probably be more convenient to distinguish the hard consonant and vowel sounds by making the marks thicker or stronger, instead of adding the accent. And indeed the same might be done in typography, if considered preferable to the use of the accents. The hard or aspirated vowels would thus still be more conspicuous than the soft.

In shorthand it is essential that all the characters should be as simple as possible in form, and that the consonant characters should admit of being joined end to end, so that the consonants of every word may be written continuously; also that the vowel characters should be such little marks as may either be written continuously with the consonants, or be afterwards added, whenever they are for distinctness required to be noted. All this might be carried out perfectly with some little modification of the proposed consonant characters, and without any change in the vowels. Instead of the knobs and other distinctions the straight lines and segments might be placed horizontally or vertically for the medials, but might incline downwards, for the labials, and upwards for the gutturals. The segments representing Puffs, for distinction, might have their convex side downwards, and those for Hums upwards. Shorter straight lines a little inclined from the vertical might be used for the Whistles, and hooked lines nearly horizontal for the Hisses; or) when conjoined with other consonants) small ellipses inclined downwards or

upwards. The Trills might be represented by single instead of double vertical segments. The consonant characters would then present such forms as these :—

B D G V Th Gh M N Ng W Y Z Zh R L



and forms more suitable for quick writing can hardly be devised. They are practically the same as those adopted in Pitman's well-known system, and their only advantage would be in their more perfect correlation with the sounds they represent, which (as before stated) is a great aid in learning and retaining them in memory, and in the greater symmetry and completeness of this set of symbols.

The vowel characters above proposed scarcely admit of simplification, and in respect of them the suggested phonography has the merit of being more complete and accurate, and not less simple, than any that have hitherto been used for shorthand. They might be put, when required, in their proper relative positions, under or on the left side of the consonant that follows them, or over or on the right side of the consonant that precedes them ; and if used in a word without a consonant, then in their proper position above a small horizontal line.

Useful time-saving contractions and other expedients might evidently be introduced as easily with this as with any other set of characters.

But the purpose of touching on the subject of shorthand here is merely to show that if universal phonography should ever come into use it ought (besides its other advantages) to make the practice of writing and reading shorthand of much easier attainment. For no new method of spelling would be required, and the very characters used in the shorthand might be suggested by those that would then be in common use.

With regard to the application of the proposed system of phonography to other languages, if we may rely on "The

Standard Alphabet for reducing unwritten languages and foreign graphic systems to a uniform orthography in European letters," by Dr. R. Lepsius, of Berlin, and on Prince L.-L. Bonaparte's Lists, given in Mr. Ellis's "Early English Pronunciation," and on other more recent treatises, it is certain that the fifteen consonants for which distinct characters are here provided include every essentially distinct elementary consonant sound, of any considerable importance, which is in actual use in any known language. Indeed we may safely conclude that the human organs of speech are hardly capable of producing with ease any other sorts of consonant sounds that would be suitable for language.\*

But there are in certain languages peculiar ways of pronouncing some of our common consonant sounds, which it would be needful to indicate. The principal peculiarities of this kind are the following:—

(1.) In the ancient Sanskrit, and also in the modern Hindustani, and partially in other Oriental languages, the medial consonants *d*, *t*, *n*, *sh*, *r*, *l*, are pronounced not only in the simple way common to other languages, but also with a peculiar resonance produced by turning upwards and backwards the tip of the tongue so as to touch the top of the palate; and when so pronounced are distinguished in those languages by different letters. Lepsius proposed, in his "Standard Alphabet," to indicate these by adding a dot underneath the letter; and this method might be adopted with equal facility here.

(2.) In Arabic and some cognate languages, and also in

\* The only exceptions seem to be (1) a sort of guttural vibration, like an incipient growl, sometimes used in our northern counties instead of the common sound of *r*. This, if required, might be denoted in our system by the same mark as *r*, only adding a knob at the top to show that it is a guttural, not a medial trill. But we might almost as well distinguish in like manner the labial vibration, sometimes used to express contempt, as when one utters *pooh* with unusual energy.

(2) The clicks, or smacks, as they might better be called, which are noises made in suddenly opening a stop made in some part of the mouth by air drawn inwards. Several noises of this kind are used in speech by the South African tribes; and we ourselves use four though not in language; the labial, which is simply a kiss; the medial, which is a sound commonly made to express vexation or regret; a lateral-medial also and the guttural, both which are frequently used by riders to urge on their steeds. To indicate these sounds, if required, a little cross, or other distinctive mark might be used in the proper positions to indicate in what part of the mouth they are produced.

Hindustani, the consonants *d*, *t*, *z*, *s* are pronounced in two ways; one, the same as in other languages; the other by turning the tip of the tongue downwards, and causing its breadth to touch or to approach the whole anterior surface of the palate as far as the teeth. To sound the Spanish *ll* the whole breadth of the tongue should touch the palate. In Polish and other Slavonic languages, also, a thick sort of pronunciation is given to *zh* and *sh*. All such singularities might be indicated by peculiar marks underneath the ordinary symbols.

The Sanskrit and Hindustani languages have distinct characters to represent *b*, *p*, *d*, *t*, *g*, *k*, when followed by an aspirate (like the *b* and *d* in our words *abhor*, *adhere*); but in our system this will be sufficiently expressed by marking the vowel that follows as a hard vowel.

In many languages several of the simple consonant sounds are often accompanied or followed by a more or less distinctly pronounced *w* or *y*, and are sometimes said to be "labialized" or "palatalized" accordingly. In this system such peculiarities may be well denoted by adding (in small), underneath the consonant character, the mark for *w* or *y*.

So the nasalized vowels, frequently used in French, might be indicated by the proper mark for the third nasal consonant (*ng*) being put (in small) under the vowel.

It has already been mentioned that endless variations may be made, both of the Pharyngal and of the Oral vowels. Endless varieties of diphthongs also may be uttered, beginning with any of the Pharyngal and ending with any of the Oral vowels. But neither Lepsius nor any other authority describes any other kind of vowel sound than such as falls within one or other of these three groups; and the only question is whether the proposed notation is sufficient for all languages. The Pharyngal and Oral groups, with five in each (and power to distinguish between the short and long pronunciation), are undoubtedly more complete than in any existing alphabet, and may therefore be presumed to be sufficient: but it may be desirable in some languages to distinguish more than the five diphthongs for which provision is made. This might be done to the extent of five *ee*

Diphthongs, and the same number of *oo* Diphthongs, without introducing any other kind of character; and by using a small oval or circumflex instead of the segment marks, Diphthongs made with the medial Oral might be denoted in a similar way, if required.

## APPENDIX.

### PHONOGRAPHY FOR THE BLIND.

The simple and ingenious implement invented by Braille for enabling the blind to write with ease and precision, so that their writing should be legible to the touch, has so commended itself in practice that it may well be accounted the best means yet contrived for that purpose. It consists of two slips of metal, connected by a pivot or hinge at one end, and capable of being secured at the other end, so as to hold between them a piece of stiff paper. In the upper slip are two rows of rectangular holes, each hole having three notches on its vertical sides; and in the lower slip indents are made underneath these notches, so that by pressing the paper with a blunt style where the notches occur, a good impression may be made in six different positions within every hole, producing palpable lumps on the other side of the paper. The letters of the alphabet and the stops and other necessary marks are denoted by these lumps in particular positions; and it is found that the blind can learn to distinguish them, finding out by the touch in passing along the line, whether the lumps belong to the first or second tier of notches, and whether they have been made in the uppermost, middle, or lowermost places.

When the blind writer has used the two rows of holes in the metal slip, he shifts his paper up so as to use them again for two new lines of his writing.

But a really good phonetic system, simple and complete and logically arranged, such as the system proposed in this essay for universal adoption, has never yet been applied to this method of writing for the blind. Yet it is certainly far more important for the blind than it is for the seeing that the marks by which they read should strictly correspond with the sounds they hear. Nor is it difficult to devise schemes whereby dots in one or more of the six positions may represent all the needful consonants and vowels, as well



as stops and other requisite marks, in such a way as to preserve some analogy between the symbols and the sounds ; though of course with so small a number of given positions it is not possible to do this perfectly.

In the following scheme it will be seen that the consonants are distinguished by having dots in the top and bottom lines, and in the first and second tiers : the Pharyngal vowels are confined to the first tier, the Orals to the second, while the Diphthongs have one dot in each tier.

### *Consonants.*

<i>Bursts.</i>	<i>Puffs.</i>	<i>Hums.</i>	<i>Whistles.</i>	<i>Hisses.</i>	<i>Trills.</i>
B D G	V Th Gh	M N Ng	W Y	Z Zh	R L

### *Vowels.*

<i>Pharyngals.</i>	<i>Orals.</i>	<i>Diphthongs.</i>
As in	As in	As in
et at aht ot ut	feel fill tulle full fool	ale aisle oil owl ole

The hard consonants and the hard (that is the aspirated) vowels are to be distinguished from the corresponding soft ones by a greater prominence in the dots, made by pressing the style till it pierces the paper ; which must be avoided in the case of the soft consonants and vowels. It is easy to regulate the pressure when writing by hand, so as to produce a sufficient difference ; and in printing embossed characters the same end may be perfectly attained. The value of this method of marking the relation between the soft and hard consonants would certainly be very great to the blind in the simplification of the whole phonographical system, and in reducing the number of dots which would otherwise have to be used to distinguish so many different symbols. The long Pharyngals might have their marks doubled.

As an aid to the blind in learning the consonant and vowel sounds, with the dots appropriated to each of them, a sing-song description like the following would be useful.

*Consonants.*

The Bursts are Be De Ge<sup>1</sup>  
(Or harden'd, Pe Te Ke);  
They take up all the first-tier dots,  
With bottom, middle, top, of second tier.

The Puffs are Ve The Ghe,  
(Or harden'd, Fe The<sup>2</sup> Khe);  
They're like the corresponding Bursts,  
But miss the middle first-tier dot.

The Hums are Em En Eng;  
And they reverse the corresponding Puffs.

The Whistles, We and Ye,  
(Or harden'd, Whe and Yhe<sup>3</sup>),  
Are made like Be and Ge without their corner dots.

The Hisses, Ze and Zhe,<sup>4</sup>  
(Or harden'd, Se and She),  
The first has base of first, and top of second tier;  
The other, the reverse.

The Trills are Re and Le,  
(Or harden'd, Rhe and Lle<sup>5</sup>);  
The first has middle dot of first, and all the second tier;  
The other, both the base and both the topmost dots.

*Vowels.*

Pharyngals, as in et at aht ot ut, or long in air ant art ort urt,  
(Or harden'd, as in het hat haht hot hut, or long in hair hant  
hart hort hurt),

Have one or two dots only, and descend  
From top to base of the first tier alone.

<sup>1</sup> As in *go, get.*    <sup>2</sup> As in *thin, thick.*    <sup>3</sup> As the first sound in *hew, Hugh.*

<sup>4</sup> As the middle sound in *treasure, azure.*    <sup>5</sup> As the double L in Welsh words.

And Orals, as in feel fill tulle full fool,  
 (Or harden'd, as in heel hill hul<sup>1</sup> hull<sup>2</sup> hool)  
 Are like them, only in the second tier.

But Diphthongs, as in ale ile oil owl ole,  
 (Or harden'd, as in hale hile hoil howl hole)  
 With two dots each, step down in both the tiers.

Marks for stops may be distinguished from the consonant and vowel marks by consisting of three dots only, in the lower or upper half of the line. The following set of marks for stops will easily be remembered by observing that greater weight is attached to dots in the middle row than to those in the bottom or top rows, and greater weight to dots in the second tier than to those in the first tier; also that the four in the upper part of the line are the same as the other four, only made in the upper instead of the lower part of the line.



The following useful marks would also be distinct from all the others :—

Hyphen and Dash for  
broken words and  
sentences.

Marks of elision  
at beginning  
or end of  
word.

Parentheses.

Brackets.



For the ten cyphers, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, nothing could be more convenient than the marks for the five Pharyngal vowels, and for the five Diphthongs; and wherever there might be danger of confusing them with the vowels, they might be preceded by the mark for the letter N. These marks for numerals might also for additional clearness be always made hard or strong.

<sup>1</sup> As in the French word *tulle*, or the German *über*.

<sup>2</sup> As in *pull*, *full*.

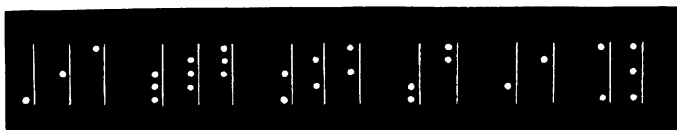
It is surprising to find that such a number of distinctive sets of marks, complete and regular, can be produced out of the six positions allowed by Braille's little implement; and still more to find that the average number of dots in these marks is very considerably less than in the irregular set of marks now commonly adopted, being only about two and two-thirds instead of three and one-third for all the consonants and vowels, or in the proportion of 4 to 5.

But a still better system might be devised, in which a smaller average of dots would suffice, with a saving of space, if instead of two tiers of three dots each, as in Braille's implement, we might have two tiers of five dots divided by an upright line. The top and bottom dots should be level with the ends of the upright line. The sightless scribe would have no difficulty in guiding his style into the hole or notch for the middle dot of the five, if a slight groove were made in the metal to help him. Nor would he have any difficulty in distinguishing the positions of the impressions made, whether level with the top or bottom of the vertical line, or a little within the top or bottom, or half-way between.<sup>1</sup>

The great advantage of this plan will at once appear from the ease with which all the phonetic sounds, with the stops, numerals, and other requisites, may be denoted, as in the following scheme; where it will be seen that all the consonants are produced by first-tier dots, and all the vowels by second-tier dots; so that whenever a vowel follows a consonant, the two may be combined by being put before and after the same upright line.

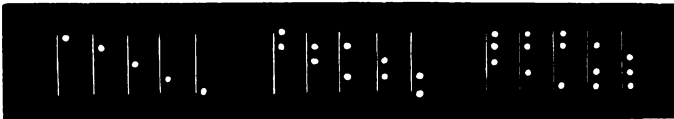
*Consonant Symbols.*

B D G V Th Gh M N NG W Y Z ZH R L



<sup>1</sup> The utility of an upright line to every letter was suggested to the author by a very intelligent blind gentleman, the late Mr. John Austin, of Hertford, who took a great interest in the various methods which have been devised for enabling the blind to write and read.

*Vowel Symbols.*

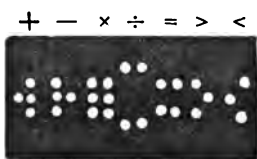
As in					As in					As in				
et	at	aht	ot	ut	feel	fill	tulle	full	fool	ale	aisle	oil	owl	ole
														

The hard consonants and vowels may be indicated (as before) by a stronger impression.

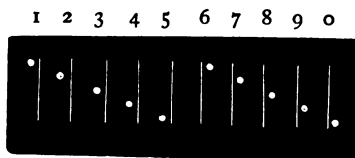
Stops and other marks might be made quite distinct from the symbols of sounds by omitting the upright line, as below ; the upright line alone without any dot being used to indicate the elision of letters or words :—



In like manner many other useful marks might be made ; the signs employed in arithmetic, for example, thus :—



The numerals themselves may be perfectly provided for by the use of the upright line and one dot, thus :—



To carry out this plan in practice it might be better, instead of using perforated slips of metal like Braille's, to lay

the paper between two exactly similar plates of perforated zinc or other metal, upon a smooth wooden board. This board should have a grooved ledge along the top and left-hand side against which the perforated plates and paper may be secured by a moveable pin or stud near the lower right-hand corner of the board. The dimensions of the upright line and of the five circular perforations on each side of it would of course require careful adjustment, and the form and size of the style and the substance and quality of the paper, so as to produce the best impressions with the least possible waste of room. From some experiments made, it seems that with plates about seven inches wide and nine inches high (the size of a half sheet of common letter paper) there would be room for sixteen rows, and twenty-five repetitions of the perforated pattern in each of them. But for beginners, and for people with not very sensitive fingertips, a larger scale would probably be preferable. When once proper dies are cut for stamping the metal, such plates could be supplied at a very cheap rate.

If either or both of the methods thus suggested for applying phonography to the use of the blind should be found worthy of adoption in practice, the author would be well repaid for the time spent upon them. He is aware that the first feeling of many who have been accustomed to the present methods will be repugnance to anything new; and some will say that phonography has been tried and failed. But no sound and complete phonographic system has ever yet been tried; the best attempt has been the very imperfect method adopted by the late benevolent Frere; and even this was said by a very intelligent blind person who could read embossed books of two other kinds as well, to be far the easiest to her. It was mainly the personal objections of the teachers that led to its disuse; but assuredly the system of phonography recommended in this essay need not deter either teachers or their blind pupils; and to the latter, would not the very simplicity and beauty of a correct and intelligent exposition of the elementary sounds of language be in itself a most valuable and interesting branch of

education ? To substitute a correct orderly and complete list of the sounds used in language, with corresponding symbols, instead of the present unsatisfactory hodge-podge of sounds in our present Alphabet, with a second hodge-podge of marks having no relation to the first, would undoubtedly give to the blind a delightful improving study instead of an unreasonable puzzle.

To teach the deaf to speak and to understand a speaker, without hearing a sound that he utters, is a more arduous undertaking by far than to teach the blind to read, though it is one in which some success has been attained. In this case language has to be learnt, however imperfectly, by observing the changes of the mouth and throat when different sounds are uttered. Here a phonetic system is a necessity to the teacher and the pupil, and the simpler the system the better ; and if reading and writing are attempted in addition, what an infinite advantage it would be to be relieved from all false and useless symbols, and from symbols that have more meanings than one !

## POSTSCRIPT.

SINCE receiving the proof of this essay, my attention has been directed to some treatises on the subject which I had not previously seen ; and I am glad to be able to fortify the positions I have endeavoured to lay down by the arguments of some of our best authorities. The following quotations strongly confirm the principles on which I have proceeded, and lead to the conclusion that though many improvements in our spelling may be made without much change in our present alphabet, yet the best and likeliest way to bring about a satisfactory reform would be the presentation of a system of phonography so simple and clear, so compendious and complete, so fitted for writing and printing, so easy to learn and to read, and adaptable to different languages, that all may see it would constitute a beautiful and improving study in itself, and a useful help in acquiring the pronunciation of other languages. These are immediate advantages, and quite independent of the greater benefits which might accrue from the general use of the system. Such a system I have done my best to present, though far from supposing that my best is the best that is possible. The researches that have been made of late years into the sounds of human speech in all important languages constitute a science of phonology, and a sure foundation for a perfect phonography. If enough is not already known and recorded to justify such attempts being initiated now for the benefit of future generations, enough never will be known. But all who make it their study to ascertain and denote the speech-sounds of our own and other languages, would do well to bear in mind that no system can have a chance of acceptance for practical use that fails in the qualifications above detailed, or aims at distinctions too nice. Too much regard for these would dim the grander prospect, and hinder all approach thereto.

Dr. Murray, in his address to the Philological Society, 1880, says :

“Spelling will always lag a certain way behind actual speech, especially the careless, lawless, speech of familiar conversation.



In my opinion, therefore, it is futile to aim at representing this in practical spelling; let us aim at providing a means of spelling what men *mean* to say, *aim* at saying, and in measured or formal speech or song *do* say, not at the shortcomings which, though inseparable from speech, are none the less unintentional, and to be discouraged. Every system of writing, except one on a purely physiological basis, like Mr. Melville Bell's Visible Speech, must be not merely conventional, but even to some extent inconsistently conventional; we shall do well if we can arrive at the stage of writing English in a way that shall practically represent the ideal of speech to which all educated Englishmen approximate, though none may reach it, and which is as far removed from the slurred or imperfect utterance of the average Londoner (which seems to be the cynosure that attracts some authors of proposed systems), as it is from the archaic or even semi-foreign pronunciation of distant provinces. This bears I think upon such matter as the representation of the obscure and unaccented vowels; in this especially I would refer with approbation to the early phonetic work of Mr. Ellis, and to the principle still maintained by Mr. Pitman (though I differ from him in several of its applications) of writing the sounds which educated men aim at producing, not those which men in a hurry actually succeed in producing. If the reader aim at the former, he may be trusted always to reach the latter; if he aim only at the latter, he will soon fall short even of them, and want a still newer spelling for his still more defective utterances."

Mr. Ellis, in his address to the same Society, 1881, speaking of the difficulty encountered by any proposed phonetic spelling, from the various ways in which the words of the same language are pronounced, argues that all, notwithstanding, are understood with sufficient accuracy, and adds:

"Herein lies the explanation. We attend to the genus of sounds and the genus of thoughts only. The little specific or variational differences do not affect intelligibility in the least. And it would seem that all we have to aim at, for the purposes of life, is such a record of these genera as would enable any one to reproduce them."

Both these extracts lead to the conclusion that in phonography for practical use we should be satisfied with symbols for the principal sounds alone, without attempting to provide for the endless minor variations of their pronunciation by different persons and under different circumstances.

Professor Whitney, of Yale College, U.S., in an interesting paper entitled "How shall we Spell?" (reprinted by The English Spelling Reform Association 1885) makes the following remarks :—

"It is moreover to be noted that a phonetic spelling, far from contributing, as its enemies claim, to the alteration and decay of the language, would exercise an appreciable conserving influence, and make for uniformity and fixedness of pronunciation. So loose and indefinite is now the tie between writing and utterance that existing differences of utterance hide themselves under cover of an orthography which fits them all equally well, while others spring up unchecked. No small part of the conservative force expends itself upon the visible form alone; whereas, if the visible and audible form were more strictly accordant, it would have its effect upon the latter also. The establishment of a phonetic orthography would imply the establishment and maintenance of a single authoritative and intelligible standard of pronunciation, the removal of the more marked differences of usage between the cultivated speakers of different localities, and the reduction of those of less account; and it would hold in check, though nothing can wholly restrain, those slow and insidious changes which creep unawares into the utterance of every tongue.

"The future is a very long period, and a great deal is possible in the course of it. There is no telling, spite of present appearances, that the public temper may not come to admit, some time, the introduction of improvements of one kind and another into our orthography, which shall prepare the way for a more thorough reform. Meanwhile, we look with interest and respect upon the effort of every one who is labouring towards that end, since, however little he may seem to accomplish, he is at least contributing his mite towards the arousing of public attention to the subject, and helping, perhaps, to inaugurate a change of feeling."

"It must be a purely practical consideration that gives the new turn to the history of English writing. Now we have such a dominant practical consideration, and it is this—the immense waste of time and effort involved in learning the present orthography. It is the generations of children to come who appeal to us to save them from the affliction which we have endured and forgotten. It has been calculated over and over again how many years are on an average thrown away in the education

of every child, in memorising that intricate tangle of rules and exceptions which constitutes English so-called orthography, and how many millions of money are wasted in the process on each generation."

"We may see yet more clearly the nature of the burden it imposes by considering what it is to foreigners. Our language, from the simplicity of its grammatical structure, would be one of the easiest in the world to learn, if it were not loaded with its anomalous orthography. As the matter stands, a stranger may acquire the spoken tongue by training of the mouth and ear, or the written, by help of grammar and dictionary, and in either case the other tongue will be nearly as strange to him as if it belonged to an unknown race. It is doubtless within bounds to say that the difficulty of his task is thus doubled. And this item must count for not a little in determining the currency which the English shall win as a world language—a destiny for which it seems more decidedly marked out than any other cultivated speech. In view of what we expect and wish it to become, we have hardly the right to hand it down to posterity with such a millstone about its neck as its present orthography."

My next quotation shall be from an excellent paper by Mr. Henry Sweet, entitled "Spelling Reform and the practical Study of Languages," read before the English Spelling Reform Association, Dec. 1884:—

"We may distinguish two stages in dealing with the problem of sound-notation. The first is to recognize fully its importance—to recognize that the problem of *writing* sounds is fully as important as that of *analyzing* them. The second is to recognize its difficulties, and at the same time to recognize that these difficulties can only be grappled with by means of scientific methods. It is only in this way that we can hope for a satisfactory result. The history of the English Spelling Reform Association is decisive on this point. When we first began our deliberations there was a general belief that the reform of English Spelling was really a very simple matter, and that all that was wanted was a little common sense. When, however, common sense had gone on for years, hatching one scheme after the other, it became necessary to try something else. We then began to see that an accurate knowledge of the facts of English pronunciation would be a help in settling the spelling of English sounds.

In this way the Association gradually developed a genuine school of research of its own, which has produced some excellent work. I need only refer to Mr. Evans's investigations into the formation of speech-sounds, and Mr. Lecky's work at spoken Irish Gaelic, which I hope soon to see published. By working on this broad scientific basis the Association has really been able to narrow the choice of a reformed alphabet within very definite limits, and as long as we continue to make the Roman alphabet our basis of operation, there seems every reason to believe that we shall soon arrive at a complete agreement. But this is just the question: Is any permanent and satisfactory reform possible on the basis of the Roman alphabet? The answer is, that people will put up with the defects of the Roman alphabet as long as they have no other alternative, but no longer. For my part I am not at all sure that a bold policy would not be the best even now; I mean that of breaking entirely with the Roman alphabet in favour of one constructed on rational principles. I used to think that Bell's *Visible Speech* might one day supersede the Roman alphabet. But during the last five years my ideas on the subject have been completely revolutionized; and I am now convinced that the only final solution of the spelling reform question is the introduction of a universal phonetic shorthand, systematically constructed, but elastic enough to adapt itself to the requirements of each separate language. Every one would have an inducement to learn such a shorthand, while, as it is, most educated people have every inducement *not* to learn Phonotypy, and Glossic, and Romic, and Union, and the rest of them. In the practical study of language the inducement would be even greater, and the use of a totally new alphabet would obviate all danger of confusion with the traditional spellings of each language."

After proceeding to sketch out the method he would recommend for the study of a language, beginning with the acquisition of a thorough mastery of the pronunciation, first of isolated vowels, then of consonants in syllables, then of words, and lastly of sentences, Mr. Sweet adds:

"At first we shall have to content ourselves with a Roman notation, and to put up with the inconvenience of its clashing with the conventional spelling; but we must not lose sight of our ideal—a phonetic shorthand, perfectly accurate and unambiguous, capable of being written without effort at a moderate speed—say ninety words a minute—and last, but not least, which can be printed with a manageable fount of moveable types."

I need hardly say that the ideal, described so well in the last-quoted sentence, is precisely that which I have had in view in this essay ; and if Mr. Sweet is endeavouring to realize that ideal, no one will be better pleased than myself if his success surpasses mine. One remark I would add, however, which is that if the ideal is sufficiently carried out, it would be better for the learner of a language to have its sounds at once represented in the new symbols, than in any possible modification of the Roman notation ; for they would be far easier to learn and to use. The symbols of Mr. Bell's Visible Speech would not answer the purpose because they are utterly unsuited for quick writing, and though not so bad for printing, are, many of them, so much alike as to be liable to be mistaken for each other without close inspection.

I will conclude with some extracts from the very careful and elaborate treatise on Speech-Sounds by Mr. Ellis, published last year in the ninth edition of the *Encyclopædia Britannica*, vol. xxii.

In the opening paragraphs (Art. 1) Mr. Ellis gives a list of English words which contain all the important vowel and consonant sounds of the language, as follows :—

“best, bait, baa, bought, boat, boot, knit, net, gnat, knot, nut, nook, file, foil, fowl, fuel, hay, pea, bee, toe, doe, cape, gape, whey, way, feel, veal, thin, then, seal, zeal, rush, rouge, hue, you, ear, ring, gull, little, sum, chasm, sun, open, sung, chest, jest.”

and then adds the following list of foreign words containing the important additional sounds which are used in French, German and Italian (F. G. It.) :—

“bête (F.), lâche (F.), nò (It.), dû (F.), feu (F.), veuf (F.), vin (F.), vent (F.), vont (F.), un (F.), soin (F.), soi (F.), lui (F.), dach (G.), teich (G.), tage (G.), siege (G.), wahl (G.), paglia (It.), besogne (F.).”

Afterwards he details a large number of the variations of speech-sounds used in English and Foreign languages, arranging them in connection with the twenty-four letters

of a modified Roman alphabet, and adds the following remarks :—

“The above Alphabetical List . . . has been reduced to the smallest possible suitable for giving a notion of the kind of symbolisation required for universal alphabets. The list from which it was extracted contained double the number, and was still incomplete, even so far as the writer’s investigations had extended. A universal alphabet would probably require 1000 cases to be provided for. It would be difficult for even the inventors to use such an alphabet, and absurd to present it for practical use . . . Universal writing is still a philosopher’s stone, though much has been learnt in its pursuit . . . Fortunately writing long preceded phonetic knowledge. The number of distinct vowels in any one language rarely exceeds fifty, and practically fewer still are needed ; for a native needs only a broad hint of the sound to reproduce it. The signs for English in Art. 1. are rather superabundant than deficient, and the small additions of foreign signs suffice for French, German and Italian practically, though very deficient scientifically. In fact the modes of combining sounds in these three languages and English are so different, that the alphabet has to be differently conceived for each. This is the final breakdown of Universal writing. An English, German, French and Italian reader requires an alphabet founded on his own linguistic habits, and very insufficiently comprehends any other. But even a rough appreciation for linguistic purposes is better than the thoroughly false appreciations now current.”

It is with much pleasure that I find that this prince of phonologists, after a life of study and research on the subject, gives a list of speech-sounds for which symbols should be provided very nearly identical with that given in this essay, though arranged in different order. The few additional sounds which he notes as required for French German and Italian, are all such as might be provided for as suggested in p. 29, without derogating from the simplicity of the system. Mr. Ellis’s remarks on the needlessness and absurdity of offering for practical use a more elaborate system quite confirm the views that he indicated in his address to the Philological Society.

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"We have pleasure in calling attention to a paper, by Mr. W. Benson, on "The Science of Colour," which is published among recent Sessional Papers of the Institute of British Architects, No. 7. This essay is in continuation and further exposition of the author's views as laid down in the very able volume we reviewed on the 8th of August last. As is the case with all attempts to revise long held convictions, Mr. Benson's theories and experiments have been received with hesitation by many students, and by others with absolute denials. Our opinions have been already expressed. The subject our author has treated is so important, his manner of dealing with it so able, and his experiments—we use this term in the common sense—are so interesting, that practical students will do well to give him ample hearing, even if they do not accept his conclusions."—*The Athenæum*, April 3rd, 1869.

"On a subject so attractive as Colour . . . it is a pleasure to meet with something original, in which thought and labour have not been spared, and the truth of nature alone is sought. The book before us is a work of much research, and seems to promise useful results. . . . The next Chapter recommends some further experiments with the prism, as novel in their application as the last, by which the prismatic colours and their varying combinations may be seen in juxtaposition with their complementary colours. We are inclined to think that these experiments, simple and almost obvious as they are, constitute one of the most useful parts of the work. . . . We may next notice some remarks on 'Intermediate Colours,' or those which lie in a direct gradation between two given colours. The mixture of pigments does not in general give true results. Rotation has been practised, but is not convenient. About a century ago, Lambert, a German philosopher, used the simple and beautiful method of reflecting one of the colours by a slip of polished glass upon that part of the glass through which the other colour was seen. Here we have Lambert's method recommended and illustrated, with an easy mode of finding that position of the eye in which equal proportions of the two colours are combined. It is needless to show how useful to artists, as well as to learners, such simple means of testing the correctness of gradations and contrasts of colour may be. . . . The description and use of what Mr. Benson has called 'The Natural System of Colours' is, perhaps, the



most striking and attractive part of the work. Hitherto no scheme has been used which would find a place for all possible combinations of three primary sensations of colour; but by the aid of the simple geometrical figure of a cube, this is perfectly effected, and the value of the idea is immediately evident in the facility it affords for conceiving and forming all sorts of gradations and contrasts, and harmonious arrangements of colour. . . . In every plane section of the cube, the colours must vary according to simple laws of gradation in every direction, forming some peculiar natural harmony of colour. . . . The great point of the system is that it is suggestive of endless variations. Not only may the sections themselves be varied, but they may be wholly or partially combined, symmetrically, or in endlessly varied ways. . . . We look for a striking effect on all sorts of colour-designs, when the principle here introduced becomes known; for it is not unlikely that in this idea of the sections of the colour-cube, we have a key to the infinite natural harmonies of colour."—*The Builder*, July 25th, 1868.

"It is from essays like this, which are conceived and carried out, not only with force and intelligibility, but with a clear scientific basis of fact and argument, that we may hope to see something eventually rise up which shall have more of the semblance of a science than the shallow and ignorant dogmatism which now prevails. Mr. Benson thoroughly apprehends both aspects of the subject he has discussed—the art standpoint and the physical standpoint. His book should be adopted by the Science and Art Department as an educational treatise."—*Scientific Opinion*, Dec. 30, 1868.

"Those of our readers who are interested in this subject will remember with what cordial approbation we reviewed Mr. Benson's treatise. We strongly recommend to their study a paper which was read by the same author at the Institute of Architects on February 15th. . . . Few, we think, who read and understand that paper will deny the advantage of science in art. It establishes the vast superiority of a system of colour founded on the sensations excited in the eye . . . over that which has arisen from a mere misconception of the results of mixing pigments. 'No lover of art,' says the author, 'will have reason to regret the attention which is needful in this, as in every other study, to emancipate the mind from erroneous first impressions, to understand the truth, and to know why it is the truth. Even the increase of interest and beauty in the subject he studies will repay his trouble, without regard to the practical advantages which always attend the right application of science: and the disinclination which many feel to the union of science and art . . . will be quickly exchanged for congratulation, and desire for more of that good fruit which commends itself to our taste.'"—*Scientific Opinion*, April 21st, 1869.

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. . . "This method of expressing the relations of colours is a great help to the imagination. You will find these relations of colours stated in an exceedingly clear manner in Mr. Benson's 'Manual of Colour,' one of the very few books on Colour in which the statements are founded on legitimate experiments."—*Lecture by Prof. J. Clerk Maxwell on Colour-Vision, at the Royal Institution*, March 24th, 1871.

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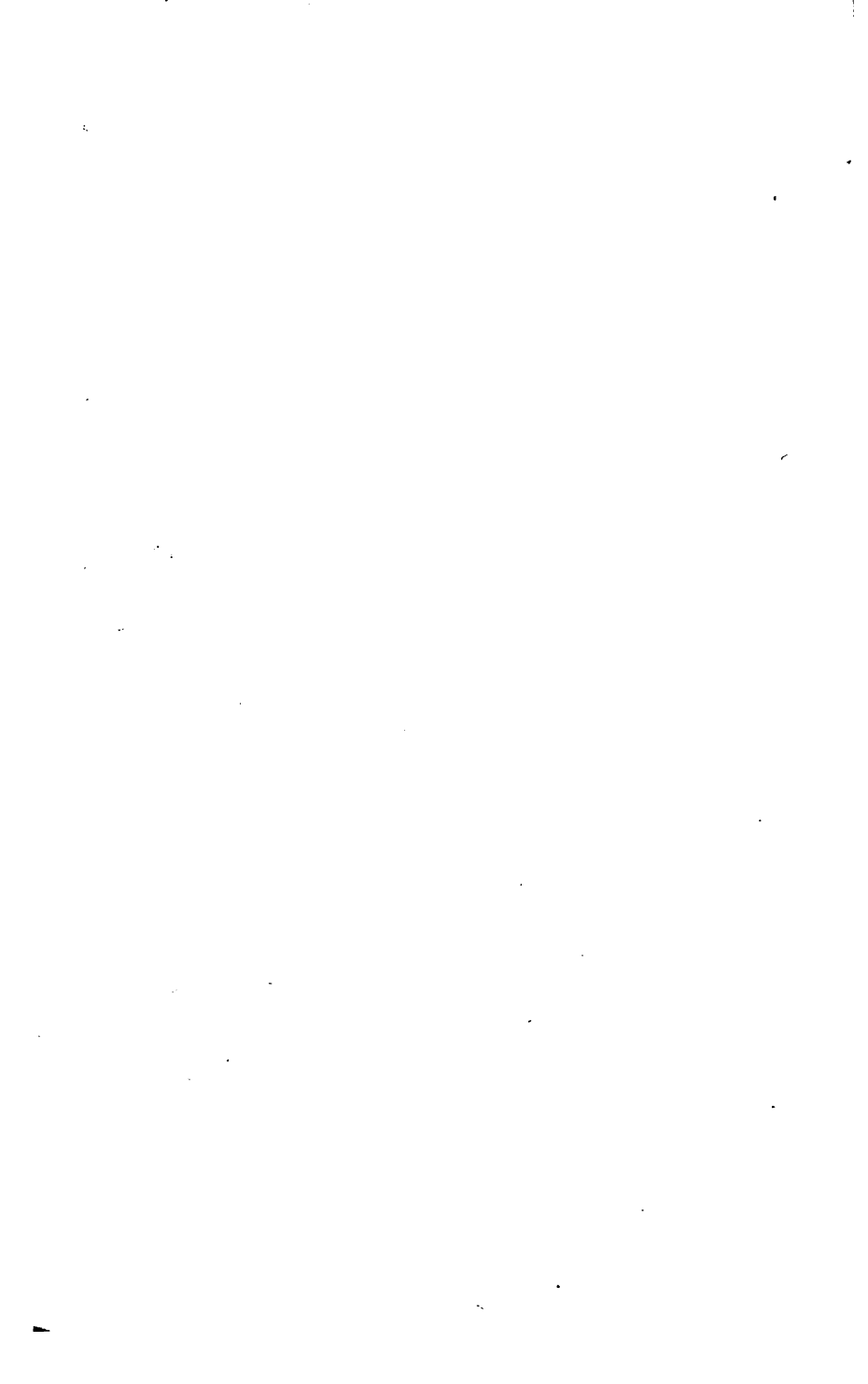
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# USEFUL TABLES.

## WEIGHTS, MEASURES AND MONIES.

### I.—LOCAL.

#### MALAY WEIGHTS.

			lbs.	oz.	dra.
	1	Tahil, nearly	0	0	23
2 Tahils	1	Chittack	0	1	13.9
16 Tahils	1	Catty	1	6	13
100 Catties	1	Picul	142	10	10½
3 Piculs	1	Bhara	428	0	0

#### CHINESE WEIGHTS.

			lbs.	oz.	dra.
	1	Tahil	0	0	21½
16 Tahils	1	Catty	1¼ or 1	5	5½
100 Catties	1	Picul	133½, 133	5	3½
40 Piculs	1	Koyan*	5,333	5	3½

\* Nominally. The koyan is properly a measure of capacity. A koyan of clean rice weighs about 43 piculs, and a koyan of salt about 63 piculs.

The Chinese picul is used by Europeans. The Chinese and other Native traders purchase pepper, rice, coffee &c. from Native vessels by the Malay picul of lbs. 142. 10. 10½; but sell to Europeans by the Chinese picul of lbs. 133½.

## GOLDSMITHS WEIGHTS

12 Sagas.....	1 Mayam.....	52 grs. Troy.
16 Mayams .....	1 Bunkal, or 2 Spanish Dollars..	832 "
20 Bunkals .....	1 Catty,.....	16,640, (or 30 oz. 15) dwts and 11, 8, 12 grs.

In Singapore 16 small sagas make 1 Mayam.

## MEASURES OF CAPACITY.

4 Kipoi .....	1 Chupah
4 Chupahs,....	1 Gantang=271. 65 cubic inches, or 1½ gals. nearly.
10 Gantangs, ..	1 Parah,
80 Parahs.....	1 Koyan, or 40 bags.
Paddy is measured by the gantang or parah, 800 gantangs making 1 koyan, or 40 bags.	
Rice is sold by the koyan of 43 piculs weight.	
Chunam is measured by the parah.	
Java Tobacco is sold by the corgé of 40 baskets. Bali Tobacco is sold by the picul.	
Piece Goods are sold by the corgé of 20 pieces.	

## LINEAR MEASURES.

		English Feet Yards.
1 Hasta	or cubit, about.....	1½ or 1
2 „ .....	1 dipa „.....	8 or 2
2 Dipas .....	1 jumba „.....	12 or 4
20 Jumbas .....	1 orlong „.....	240 or 80

## SQUARE MEASURES.

		Feet Yards.
1 Hasta .....		2½
1 Jumba.....		144, or 16.
400 Jumbas.....	1 orlong ....	6400, or about 1½ acre; or 1 ac. 1 rood and 12 perches.

## MONIES.

The local currency is the Spanish dollar, divided into cents. Mercantile accounts are kept in this currency. The Indian Rupee and its subdivisions are legal tender, but are little used.

The copper coins in use are cents, half cents and quarter cents of the Spanish dollar, issued from the Calcutta Mint. In reckoning, 10 cents are called a *kopang*, 12½ cents (one eighth) a *tali*, and 25 cents a *suku* (quarter).

**II.—ENGLISH.****LINEAR MEASURES.**

12	Inches	=	1 Foot
3	Feet	=	1 Yard
5½	Yards	=	1 Rod or Pole
40	Poles	=	1 Furlong
8	Furls.	=	1 Mile
69	Miles	=	1 Degree

**SQUARE MEASURES.**

144	Inches	=	1 Foot
9	Feet	=	1 Yard
30½	Yards	=	1 Perch or Rod
40	Perches	=	1 Rood
4	Roods	=	1 Acre
10	Chains	=	1 Acre
640	Acres	=	1 Mile

**MEASURES OF SOLIDITY.**

1728	Cubic Inches	=	1 Foot
27	Cubic Feet	=	1 Yard

**IMPERIAL MEASURES OF CAPACITY.***Division I.*

Used for all liquids and for all dry goods, except such as are comprised in the Second Division.

4	Gills	=	1 Pint	=	35½	cup. inches nearly.
2	Pints	=	1 Quart	=	69½	"
4	Qrts.	=	1 Gallon	=	277½	"
2	Gals.	=	1 Peck	=	554½	"
8	Gals.	=	1 Bushel	=	2218½	"
6	Buhl.	=	1 Cub. Quart	=	10½	"
5	Qrts.	=	1 Load	=	51½	"

A Bushel of Wheat should average 60 lbs.; Barley 47 lbs.; Oats, 38 to 40 lbs.

A Load of Hay or Straw consists of 36 Truseest.

A Truss of Straw should weigh 36 lbs.; Old Hay, 56 lbs.; New (until 1 September) 60 lbs.

A Hogshead of Wine contains about 52½ gallons; a Buncheon, 70; a Pipe, 105.



*Division II.*

Used for potatoes, fruit, and other goods.

2 Galls.	..1 Peck	= 70½	cub. inches nearly.
8 Galls.	..1 Bushel	= 281½	"
3 Bhls.	..1 Sack	= 5	cub. feet nearly.
12 Sacks	..1 Chal.	= 58½	"

The imperial Gallon contains exactly 10 lbs. avoirdupois of pure water consequently the pint will hold  $1\frac{1}{4}$  lbs., and the bushel 80 lbs.

**WEIGHTS.***Division I.**Avoirdupois Weight,*

27½	Grs.	..1 Dram	= 27½	Grs.
16	Drms.	..1 Ounce	= 437	"
16	Ounces	..1 Pound (lb.)	= 7000	"
28	Pds.	..1 Quarter. (qr.)	=	"
4	Qrts.	..1 Hundred Weight (cwt.)	=	"
20	Cwts.	..1 Ton	=	"

This weight is used in almost all commercial transactions, and in the common dealings of life.

*Special weights belonging to this Division.*

		cwt.	qr.	lb.	
13	Pounds	..1 Stone.	0	0	14
2	Stones	..1 Tod.	0	1	0
6½	Tods	..1 Wey	1	2	4
2	Weys	..1 Sack	3	1	0
12	Sacks	..1 Last	39	0	0

} Used in the Wool Trade.

The Butchers' and Fishmonger's Stone weighs 8 lbs.

*Division II.**Troy Weight.*

24	Grains	...1 Penny wght.	= 24	grs.
20	Pny. weights	..1 Ounce	= 480	"
12	Ounces	..1 Pound	= 5760	"

*Division III.**Apothecaries Weight.*

28	Grains	...1 Scruple
3	Scrups	...1 Dram
12	Ounces	...1 lb.
8	Drams	..1 Ounce;

*Division IV.**Diamond Weight.*

16	Parts	..1 Grain (8-10th Grains Troy).
4	Grains	..1 Carat (3, 1-5th " )

## ANGULAR MEASURE,

## OR DIVISIONS OF THE CIRCLE.

60 Seconds.....	1 Minute
60 Minutes.....	1 Degree
30 Degrees.....	1 Sign
90 Degrees.....	1 Quadrant
360 Degs. or 12 Signs.....	1 Circumference.

## TABLE OF MISCELLANEOUS WEIGHTS AND MEASURES.

1 firkin of butter.....	56 pounds.
soap .....	64 pounds.
soap .....	8 gallons.
1 Irish measure .....	217.6 cubic ins.
1 groes .....	12 dozen.
1 great gross .....	12 grosse.
1 head .....	4 inches.
cod-fish, herrings, or meal	12 barrels.
1 ton vegetable oil .....	236 gallons.
animal oil .....	252 gallons.
wool .....	28 pounds.
1 wey of wool.....	182 pounds.
1 aum of hock contains.....	36 gallons.
1 barrel imperial measure	9991.864 cubic ins.
soap .....	256 pounds.
1 last of soap or pitch and tar	12 barrels.
wool .....	4568 pounds.
1 pack of wool .....	240 pounds.
1 palm .....	3 inches.
1 pipe of Madeira Wine.....	115 gals. Imp.
Cape do. ....	92 do. do.
Teneriff do. ....	100 do. do.
Port do. ....	115 do. do.
1 pipe Lisbon Wine .....	117 do. do.
1 pole Woodland .....	18 feet
Plantation .....	21 do.
1 sack of wool .....	364 pounds,
1 span .....	9 inches,
1 stone of meat .....	8 pounds,
(horseman's weight) ....	14 do.
glass .....	5 do.
wool .....	14 do.
1 butt of sherry .....	100 gallons,
1 clove of wool .....	7 pounds,
1 last of hides .....	20 dickers,
1 dicker of hides .....	10 skins,
1 seam of glass.....	24 stone,
1 pocket of hops .....	1½ cwt.
1 bag of hops .....	3½ do.
24 sheets of paper .....	1 quire,
25 do. do.....	1 Printer's qr.

20	quires do.....=	1	ream,
21½	quires do. ....=	1	Printer's rm.
2	reams do.....=	1	Bundle,
1	chest of Congou Tea ....=	84	lbs.
1	chest of Hyson do. from 60 to 80		lbs.
1	pocket of hops .....=	112	lbs.
1	stone of hemp .....=	32	lbs.
1	tub of butter .....=	84	lbs.
1	bushel of coals .....=	86	lbs.
40	bushels of potatoes ....=	1	ton
1	bushel of salt.....=	50	lbs.
100	tiles .....=	1	load.
128	cubic feet of wood ,,,=	1	cord.
	of sand		
18	of earth } =	1	ton.
17	of clay }		
1	stone of fish =	8	lbs.

#### SIZES OF DRAWING-PAPER.

Demy.....	20	by	15½
Medium....	22½	"	17½
Royal.....	24	"	19½
Super Royal	27½	"	22
Imperial....	30	"	23
Elephant ..	28	"	23
Columbier ..	85	"	23½
Atlas .....	34	"	26
Double Elephant	40	"	27
Antiquarian	53	"	31

#### IV.—ORIENTAL.

*Bombay, Surat, Bengal, and Madras Maunds compared with the English Avoirdupois Pound Weight.*

		lbs. Avoird.
Bombay Maund .....	of 40 Seers per Md. (By. Md.)	— 28 lb.
ditto .....	of 41 " ditto " "	— 29.400
Surat Maund .....	of 42 " ditto (St. " )	— 37.333
ditto .....	of 43 " ditto " "	— 38.266
ditto .....	of 44 " ditto " "	— 39.199
ditto .....	of 40 " ditto " "	— 40.366
ditto .....	of 40 " ditto " "	— 41.066
Bombay Candy of 20 Mds ..	of 40 " ditto (B. Cy.)	— 560
ditto ....	of 21 do. .. of 40 " ditto " "	— 568
ditto ....	of 22 do. .. of 40 " ditto " "	— 616
Surat Candy ...	of 20 do. .. of 40 " ditto (St. Cy.)	— 746.66
ditto ....	of 21 do. .. of 40 " ditto " "	— 784
ditto ....	of 22 do. .. of 40 " ditto " "	— 821.33
Bengal Factory Maund ....	of 40 " ditto " "	— 74.6663
ditto .....	Bazaar ..... of 40 " ditto " "	— 82.133
Madras Maund of 8 Viz .....	(St. Cy )	— 25
Canton, Picul .....		— 133½
Madras Candy of 20 Mds ...		— 500

## BENGAL.

## WEIGHTS.

The great Weights are Maunds, Seers, Chittacks, and Siccas, thus divided :—

5 Siccas	} are equal to {	1 Chittack.
16 Chittacks		1 Seer.
40 Seers		1 Maund.

## CLOTH MEASURE.

3 Corbe .. ..	= 1 Ungoollee.
3 Ungoollees .. ..	= 1 Geerah.
8 Geerahs .. ..	= 1 Hauth or Cubit, 18 inches.
2 Hauths .. ..	= 1 Guz or Yard.

## LIQUID MEASURE.

5 Sicca Ra. wt. of Liquor	= 1 Chittack.
4 Chittacks .. ..	= 1 Powah.
5 Powahs .. ..	= 1 Seer.
40 Seers .. ..	= 1 Maund.
5 Seers make 1 Pusseree or Measure.	
6 Pusserees or Measure make 1 Maund.	
The Covid in Cloth measure is 9 inches.	

## LAND MEASURE.

One Beegah makes 20 Chottahs	
One Bottah or 16 Chittacks,	720 sq. ft.
Eight Chittacks or $\frac{1}{2}$ a Cottah,	360 ditto
Four Chittacks or one Powah,	180 ditto
Two ks. or half a Powah make	90 ditto
One ditto .....	45 ditto
Half ditto .....	22½ ditto
Quarter ditto .....	11¼ ditto

## GRAIN MEASURE.

5 Chittacks	= 1 Koonkee.
4 Koonkees	„ 1 Raik
4 Raiks	„ 1 Pally.
20 Pallies	„ 1 Soally.
16 Soallies	„ 1 Kahuon or 50 Maunds.

## RECKONING BY THE TALE.

3 Particulars	= 1 Gundah
4 Gundahs or 20 Particulars	= 1 Cooree or Corge.

## MONIES.

Accounts are kept here in Rupees with their sub-divisions Annas and Pie: 12 Pie make 1 Anna; 16 Annas, 1 Rupee.

The standard of the Bengal money has ever been silver. Gold is occasionally coined, but the great bulk of the currency is silver.

A Lac of Rupees is 1,00,000; and a Crore, 100 Lacs or 1,00,00,000 Rupees; and in accounts, sums are distinguished into Crores, Lacs, and single Rupees, by marks or divisions, as in the foregoing examples.

Cowries, small, white, glossy shells, are made use of for small payments in the Bazar, and are generally thus reckoned:

4 Cowries } equal to { 1 Gunda. | 4 Puns } equal to { 1 Anna.  
20 Gundas } { 1 Pun. | 4 Annas } { 1 Kahun, which  
is about  $\frac{1}{4}$  of  
a Rupee.

But they rise and fall according to the demand there is for them, and the quantity in the market.

The Weight, Standard, Fineness, and Value of the Company's Rupee as defined in the Act, are here repeated:

*Weight.*—180 Grains Troy, or one Tola.

*Standard Quality.*—Eleven-twelfths Silver, one twelfth alloy.

*Value.*—The same as the Company's Rupee of 1835, the Madras, Bombay, Furruckabad, and Sonat Rupee, and equal to  $\frac{1}{16}$  of the late Sicca, Rupee.

## BOMBAY.

### WEIGHTS.

The Bombay great weights are Pice, Seers, Maunds, Candies, thus divided:—

		lbs.	oz.	dra.
30 pice.....	} make {	1 sr...avrd.	0	11 3.2
40 seers .....		1 maund ...	28	0 0
20 maunds .....		1 Candy..	560	0 0

### MEASURES.

The large dry measure in Bombay for Salt is the Phara (or Purrah) containing

10½ Adhoolas ..... = 1 Phara.  
100 Pharas .. ..... = 1 Anna.  
16 Annas ..... = 1 Rash or 40 Tons.\*

The Phara measure when used, is struck off even with a run by a rod made for the purpose.

The small dry measure for grains is the seer whereof

4 Seers ..... = 1 Puheelas.  
17 Puheelas..... = 1 Phara.  
8 Pharas ..... = 1 Candy.

Battay or Rice in the Hush is reckoned by Moora or 25 Pharas.

### LIQUID MEASURE.

The Liquid Seer Measure used in Bombay for Spirits, Arrack, and Milk, is equal in weight to 60 Rupees, or 1 lb. 19 oz. 7 dwts. 12 grains troy. The Maund consists of 40 of these seers, and the seer is subdivided into half-seers, quarter-seers, and the latter into two measures called now-tanks or nine-tanks tuchka. The measures of oil corresponds with the Maund of 28 lbs., that is, the contents weigh that, and the contents of the seer consequently weigh 11 oz. 4 dwts.

\* If 16,000 Pharas=40 tons, or 89,600 lbs., 1 Phara=56 lbs. or  $\frac{1}{4}$  a cwt.

## BOMBAY.

MEASURES.	CYLINDER.		Contents in cubic inches.
	Diam.	Depth.	
	In.	In.	
1 Olluck.	2·6	2·4	12½
8 Ollucks = 1 Measure.	5·0	5·1	100
4 Ollucks = ½ Measure.	4·0	4·0	50
2 Ollucks = ¼ Measure.	3·2	3·1	25
8 Measures = 1 Mercal.	10·3	9·6	800
4 Measures = ½ Mercal.	8·2	7·6	400

## MONEY.

Accounts are kept in Rupees, Quarters, and Reas, or in Rupees, Annas, and Pies.

100 Reas (or 4 Annas)

are equal to ..... 1 Quarter of a Rupee.

4 Quarters (or 13 Annas)

are equal to ..... 1 Rupee.

2 Reas are equal to ..... 1 Urdee or Pie.

4 Do. do. do. .... 1 Doogany or Pie.

6 Do. or 3 Urdees (Pies) 1 Pice.

8 Do. or 4 do. do. 1 Fuddea.

4 Pice or 12 Urdees

(Pies) ..... 1 Anna.

16 Do. or 4 Annas ..... 1 Quarter.

32 Do. or 8 Annas ..... 1 Half Rupee.

64 Do. or 16 Annas ..... 1 Rupee.

15 Rupees ..... 1 Gold Mohur.

Gold Coins—Mohur of 1830 weighs 180 grains, value 15 Rupees.

Silver do.—Rupee, Half Rupee, and Quarter Rupee.

Copper do.—Double Pice, Pice, and one-third Pice.

4 Pice ..... = 1 Anna

16 Annas ..... = 1 Rupee.

15 Rupees ..... = 1 Gold Mohur.

The intrinsic value of a Rupee coined into English money, (less the Mint duty of 4s. per lb.) leaves 1s. 10d. 2f., after deducting the freight and insurance to England, charges, commissions, &c.

On the same calculation, it is equal to 2 francs, 34 cents, 321 × 1000.

## MADRAS.

## WEIGHTS.

The great weights are the Pagoda, Pollam, Seer, Vis, Maund, and Candy, thus divided :—

		lbs.	oz.
10 Pagds.....	} equal to	1 Pollm. is avrds.	0 1½
8 Polls. ....		1 Seer .....	0 10
5 Seers ....		1 Vis .....	3 2
8 Vis .....		1 Maund .....	25 0
20 Mds.....		1 Candy.....	500 0

## MONIES.

The Company's rupee is now in general circulation, and is the standard uniformly referred to in all accounts. But exclusive of the Company's rupee several coins are in circulation in Madras and its vicinity. Of the gold coins, the principal are the star or current pagodas=7s. 5½d.; commonly, however, valued at 8s. The gold rupee, new coinage, is worth, according to the mint price of gold in England, 1s. 9s. 2½d. The Arcot rupee (silver) is very nearly of the same value with the Company's rupee. The European merchants keep their accounts at 12 fanams the rupee; 80 cash=1 fanam, and 42 fanams=1 pagoda. Copper pieces of 20 cash, called pice, and of 70 and 35 cash, called dodees and half dodees, are also current.

## CEYLON.

## WEIGHTS.

The Bahar or Candy of 480 lbs. Dutch Troy or 523 lbs. Avoirdupois; but the English weights are in use here. The Candy or Bahar contains 500 lbs. Avoirdupois or 460 lbs. Dutch Troy. One complete bag or 146 lbs. net or 170 lbs. Avoirdupois gross weight. The Garce equal 9355½ lbs. or 82 cwt. 2 qrs. 15½ lbs. Avoirdupois. A bale of Cinnamon is 94 lbs. Dutch Troy, or 102 lbs. Avoirdupois gross: the tare is 14 lbs. so that the net is 80 lbs. Dutch Troy or 87 lbs. Avoirdupois. The Anna of Rice in the husk is 240 lbs. Dutch Troy, or 260 2½th lbs. Avoirdupois.

## LONG MEASURE.

The Coid is 18½ English Inches.

## DRY MEASURE.

4 Cut Chundoos make	1 Cut Measure or Seer.
4½ Seers	1 Corney.
2½ Mercals	1 Parah.
8 Parahs	1 Ammonam.
9½ Ammonams }	1 Last.
or 1800 Meastres }	

Oil, Milk, and Ghee, are sold by Chundoos and Measures.

The Parah measures 16·7 English Square inches, and 5·6 inches deep; and contains 6½ English Wine Gallons, or 5·74 Imperial.

A Measure of Salt weighs 44 lbs.

Coffee and Pepper, &c. 30 lbs.

## WINE MEASURE.

15	Drams .....	make	1 Quart.
2	Quarts .....	"	1 Canade.
2½	Canades .....	"	1 Gallon.
5	Do. or 2 Gallons .....	"	1 Welt.
75	Welts .....	"	1 Leager.

Arrack is bought at 80 Welts, and sold at 75 Welts the Leager of 150 old Wine Gallons or 125 Imperial.

The Long and Land Measures are the same as in England. The Kandyan Land Measure is the Ammonam of 4 Peylas or 4 Cornies—2·735 acres.

## MONEY.

Accounts are kept in English currency, and the old Coins in circulation are as follows:

4 Pice.....make 1 Fanam.

12 Fanams, 48 Pice, .....make 1 Rix Dollar of 48 Stivers, value 1s. 6d. Sterling, or 144 Chalees.

## EXCHANGES.

4 English or 3 Dutch Chalees equal to 1 Pice.

Dutch Ducatinn pass for 80 Stivers.

Do. Shilling 7½ do.

Negapatam Pagoda 90 do.

Silver Rupee 30 do.

The Stiver or cash is a Copper Coin.

All the Coins of the Coromandel Coast are current in Ceylon.

The Star Pagoda fluctuates from 59 to 61½ Fanams in Bills drawn on Madras..

The Sicca Rupee passes for 18 Fanams either in Specie or Bills.

The Bombay do. do. 17 do. in Bills.

18 do. in Bazar.

The Spanish Dollar, from 37 to 39 Fanams.

350 Arcot Rupees equal 400 Ceylon Rupees or Rix Dollars; but Bills are generally drawn from 490 to 500 Rix Dollars per 350 Madras Rupees.

## MAURITIUS.

## WEIGHTS.

The Poids de Marc equal 108 lb. Avoirdupois.

The Measures of Capacity are chiefly English.

Accounts are kept here by merchants in English currency, which has been extended to all Her Majesty's Colonial possessions; and the old coins in use are the following:

20 Solas make 1 Colonial Livre=½ French

10 Livres „ 1 Dollar. [Franc.

But the general mode adopted in Public or Government Accounts is in Dollars of 100 cents.

The principal French coin in common currency is Sol Marque, which is of copper, and worth 3 Colonial Sols. Hence 66-2-3rd Marques equal



1 Dollar, and 2 Sols equal 1 cent. 1 Marque, 1½ cent.; and 1 Livre, 10 cents.

#### EXCHANGES.

2 Sicca Rupees equal 1 Dol.	
220 Bombay or Arcot Rupees....	100 Dols.
10 Star Pagodas .....	16 do.
10 Port Novo do. ....	13½ do.
10 Ekaree Pags .....	17 do.
1 Bombay Gold Mohur .....	7½ do.
15 Double Fanams.....	1 do.
4 Sh. 8d. Ster .....	1 do.
20 Cash .....	1 Marq.

The following is the Tariff of the Current Money and its value in Colonial Money, as fixed by Government.

#### SILVER COINS.

Spanish Dollar equals 10 Colonial Livres. Half and quarter do. in proportion.

Company's Rupee equal 5 Colonial Livres

Half and quarter do. in proportion.

Bombay and Arcot Rupee equal 4 Livres 10 Sols.

Half Silver Pagoda equals 8 Livres.

Quarter do. in proportion

Double Fanam equals 1 Livre.

5 Fanams equal 12½ Sols.

The 10 Livre pieces, struck in the Colony under the French Government, the 5 Franc pieces of France, and the German crown pieces, have the same value in exchange as the Spanish Dollar.

#### CAPE OF GOOD HOPE.

##### WEIGHTS AND MEASURES.

The weights made use of in the Cape are derived from the standard pound of Amsterdam; and those assized are from 50 lbs. down to 1 loot, or the 32d part of a pound, which is regarded as unity.

##### LIQUID MEASURE.

16 Flasks	=	1 Anker.
4 Ankers	=	1 Aam.
4 Aams	=	1 Leaguer.

##### CORN MEASURE.

4 Schepels	=	1 Muid.
10 Muids	=	1 Load. 107 schepels = 82

Winch. bushels, or 4 schepels = 3 Imp. bushels, very nearly.

The muid of wheat weighs, at an average, about 110 lbs. Dutch, being somewhat over 196 lbs. English.

## CLOTH AND LONG MEASURE.

12 Rhynland inches	=	1 Rhynland foot.
27 ditto	"	1 Dutch ell.
144 ditto	"	1 Square foot.
144 Square feet	"	1 Rood.
600 Roods	"	1 Morgen.

## COLONIAL WEIGHTS AND MEASURES COMPARED WITH THOSE OF ENGLAND.

## WEIGHTS.

100 lbs. Dutch	=	nearly 109 lbs. English avoirdupois.
100 " English	"	92 " Dutch.

## WINE OR LIQUID MEASURE.

1 Flask	=	0.6 Old gallon, or 4.946 Imperial gallons.
1 Anker	" 9½	ditto, 7.9 ditto.
1 Aum	" 38	ditto, 31.½ ditto.
1 Leager	" 152	ditto, 126.6 ditto.
1 Pipe	" 110	ditto, 91.6 ditto.

## MONEY.

Accounts are either kept in pounds, shillings, pence, and farthings, or in rix-dollars schillings, and stivers.

1 Stiver	=	¼ of a penny.
6 do.	"	2½ Pence, or 1 schilling.
8 Schillings	"	18 Pence, or 1 rix-dollar.

## BURMAIL.

## MEASURES OF DISTANCE.

The Burmese make use of two measures of distance; one they call "the poor man's measure," and the other "the chief, or great man's measure." This last is the Royal or standard measure, but the other is in most common use, except in matters where the Government is concerned.

			Miles.	Fur.	Yds.	Ft.	In.
10 Tsha kyee (hair-breadth)	1 Nhon (Sesamum seed)						
6 Nhons ... ..	1 Moyau (a small grain)						
4 Moyaus ... ..	1 Theet (fingers breadth) nearly						1
8 Theets.. ... ..	1 Maik (hand breadth)...						6
12 Theets ... ..	1 Twa (span) ... ..						9
2 Twas or 3 Maik...	1 Toung (cubit) ... ..						1 0
4 Toungs .....	1 Lan (fathom).....						6 0
7 Toungs ... ..	1 Ta (Bamboo-measure)					3	1 6
20 Tas ... ..	1 Okthaba .....				70	0	0
20 Okthabas ... ..	1 Kautha .....			6	80	0	0
4 Kauthas ... ..	1 Gawot .....			3	100	0	0
40 Gawots ... ..	1 Yeodzana .....		12	5	180	0	0
100 Tas } ... ..	1 Daing .....		1	7	208	0	0
7000 Toungs }				2	nearly.		

The equivalents given above are for the poor man's measure, Theet, Maik, Twa, Toung, Ta, and Daing are the measures in most frequent use. The Royal Cubic, Thantoung, which is the Government standard, upon being carefully compared, was found to measure exactly 19 ½

English Inches. According to this, the finger breadth (Theet), which is that of the fore-finger taken at the middle joint, is  $\frac{9}{100}$  of an inch; the fathom (Lan)  $7 \frac{1}{4}$  inches; the D bamboo (Ta)  $\frac{7}{8}$  133; and the Daing 2 miles, 193 yards, 2 feet, 8 inches.

In the Tenasserim Provinces, however, the English foot measure is coming into use, and will soon supercede those above given.

#### WEIGHTS.

The weights in use at Rangoon, and throughout the Burman dominions, are as follow:—

2 Small Rwea (red beans) = 1 Large Rwe	2 Mus = 1 Mat'h.
4 Large do. . . . = 1 Bal.	4 Mat'hs = 1 Kyat, <i>vulgo</i> Tical
2 Bals . . . . = 1 Mu.	100 Kyats = 1 Paiktha, <i>vulgo</i> Vis, = 2 65 lbs. avoird.

#### MEASURES OF CAPACITY.

2 Lamyets = 1 Lamè	4 Salès = 1 Pyi.	2 Saïts = 1 Saït.
2 Lamès = 1 Salé	2 Pyis = 1 Sarot.	4 Saïts = 1 Ten.

#### MONEY.

The Burmese currency consists, for small payments, of lead; for larger ones, of gold and silver, but chiefly of the latter. There are no coins. At every payment, the metal must be weighed, and very generally assayed,—a rude and very inconvenient state of things. The weights used in the weighing of money are the same as those used on ordinary occasions; the kyat or tical, and the paiktha or vis. being by far the most frequent. Silver may be considered as the standard. Gold is generally held to be about 17 times more valuable than silver. The weighing and assaying of the metals, used as currency, gives employment to a class of persons as brokers, money changers, and assayers. Every new assay costs the owner, if the metal be silver,  $2\frac{1}{2}$  per cent.;  $1\frac{1}{2}$  per cent. being the established commission of the assayers, while 1 per cent. is lost, or supposed to be lost, in the operation. If it be repeated 40 times, it follows that the original amount is wholly absorbed—a fact which shows the enormous waste of metal arising out of this rude substitute for coin.

#### SIAM.

##### LONG MEASURE.

1 Niw			=	$\frac{13}{16}$ inch.
12 Niws	make	1 K'ù'p	"	$9\frac{1}{4}$ "
2 K'ù'ps	"	1 Sawk	"	$19\frac{1}{4}$ "
4 Sawk	"	1 Wa	"	28 "
20 Wa	"	1 Sèn	"	130 feet
400 Sèn	"	1 Yót	"	$9\frac{1}{8}$ statute miles

Timber is bought by the Yòk, which is 64 Sawk in length, by 1 Sawk in width, being equivalent to 169 square feet, English measure.

## DRY MEASURE.

1 T'anan		=	1½ pints.
20 T'anans	make	1 T'ang	" 15 "
25 T'anans	"	1 Săt	"
100 T'ang or 80 Săt		1 Koyan.	

A Coyan is 20 Piculs. A Picul is 133½ lbs. Avoirdupois.

## MONIES.

4 P'eis	make	1 Fu'ang	=	\$ 0.075
2 Fu'angs	"	1 Săl'ng	"	0.150
4 Săl'ngs	"	1 Băt or Tical	"	0.600
4 Ticals	"	1 Tăml'ng	"	2.400
20 Tăml'ngs	"	1 C'hăng	"	48.000
50 C'hăng	"	1 Hăp	"	2,400.000
100 Hăp	"	1 Tăra	"	240,000.000

## WEIGHTS.

The standard of weight being the coin of the country, weights are designated by the same terms. A Tical weighs 236 grains Troy.

The Siamese standard of weight is just double that of the Chinese, and goods are bought and sold in Bangkok more by the Chinese than the Siamese standard.

## CHINA.

## WEIGHTS.

In China, almost every thing is sold by weight, not excepting even liquids and live stock. The weights are principal the picul, catty, and tael divided thus:—

1 tael=583½ grains Troy.  
16 taels make a catty.  
100 catties „ a picul.

At Macao, the picul is distinguished by the Portuguese into three kinds, viz:

The picul balanca of 100 catties = 133½ lbs. Avoirdupois ;

The picul seda of 111.15 do. „ 148½ lbs.; and

The picul chapa of 150 do. „ 200 lbs. 90 catties seda = a Canton picul or picul balanca.

By the first, are sold cotton and valuable articles; by the second, alum, pepper, and coarse goods; and by the third, rice.

In transactions between one Chinese and another, goods are weighed by the Chinese dotchin or balance, which is about 3 per cent. less than English weights; the latter are always used transactions with the foreigners.

*Note.*—At the money standard of 120 oz. 16 dwts. English troy weight for 100 taels, the picul, which contains 1600 taels, should weigh Avoirdupois lbs. 132.535. The actual standard of the picul being 133½ lbs., a slight discrepancy thus appears between the money tael and the commercial tael, at the standards assigned to each. But no such difference is recognized by the Chinese. This is noticed to account for what will otherwise appear erroneous in some of the following tables:

## LONG MEASURE.

- 10 fun or parts make a tsun or punt.  
 10 tsun or punts „ a chih or coid—14 $\frac{1}{2}$  in.  
 10 chih or covids „ a chang—4 yards nearly.  
 1 chang „ a yin.

## LAND MEASURE.

- 5 chih or covids make a poo or kung.  
 240 poo or kung „ a mow or acre.  
 100 mow or acre „ a king.

This is the present established land measure, which varies considerably from that formerly in use. In scientific calculations, the mow is divided into ten fun, and the fun into 24 le, and so on, through the several fractional terms which have been already given, at the commencement of the table of weights. The poo or pace, also is divided decimally, the same terms, fun, le, &c., being employed.

## MEASURES OF CAPACITY.

- 6 suh make a kwei.  
 10 kwei „ a chaou.  
 10 chaou „ a tsuy.  
 10 tsuy „ a cho.  
 10 cho „ a ho.  
 10 ho „ a shing= 31 $\frac{1}{2}$  cubic punts.  
 10 shing „ a tow. „ 316 „ „  
 5 tow „ a hwo „ 1580 „ „  
 2 hwo „ a shih „ 3160 „ „

This is the scientific division, established by the reigning dynasty, the common measures are—

- 2 yd make a ho.  
 10 ho „ a shing or pint.  
 10 shing „ a tow.  
 10 tow „ a hwo.

This table is employed almost exclusively in the measurement of grain; all other articles and even liquids being sold by weight. In dealings with foreigners, however, and probably, also, in large dealings among themselves, the Chinese sell rice and other grain by the catty and picul weight, instead of the shing, tow, &c. In the sale of paddy, two-thirds are allowed for the trouble and diminution in weight, which accompany the taking off the husk, or which is the same thing, paddy is sold at one-third the price of the same weight of rice.

In China almost every trade has a distinct system of secret numbers, that is, instead of using the proper characters for designating prices, they adopt other characters, by which they arbitrarily express their meaning, so as to be understood only by persons of the same trade.

The Chinese method of computing is by a kind of abacus, which they call a Swan-pwan, counting board.

## MONEY.

10 hwuh	make a size*	
10 size	„	a haou.
10 haou	„	a le or cash.
10 le	„	a fun or candareen†
10 fun	„	a tseen or mace,
10 tseen	„	a leang or tael. [pois.
10 leang	„	a kin or catty= $1\frac{1}{2}$ lb. Avoirdu-
100 kin	„	a tan or picul, $113\frac{1}{2}$ lbs.
7 mace	2 can.	„ a Spanish Dollar.‡

As the Chinese have no gold or silver coins, but make payments in those metals by weight, this table applies equally to money and to weights of all kinds, excepting that, in money reckonings, nothing higher than the leang or tael is employed. The only coined money the Chinese have is the le or cash. It is made of a very base alloy of copper, is round, about the size of an English farthing, and has a square hole in the middle, by which a hundred or more are usually strung together: on one side are Chinese characters denoting the reign under which the cash was cast; and on the other side, in those of the present dynasty, are either Chinese or Mantchou characters, designating the place of coinage.\* Under preceding dynasties, two, five, and ten cash pieces have been in use, as well as other coins of various descriptions; but the single cash is the only coin now current throughout the empire. It is cast also in Japan, Corea, and Cochin-China; and is clandestinely imported from the last named place, to a large amount.

## IV.—MISCELLANEOUS

## FOREIGN EUROPEAN MONIES IN BRITISH VALUE.

AUSTRIA, (*at par.*)

		<i>s.</i>	<i>d.</i>
A Ducat.....	or 60 Batzen.....	9	6
Specie Dollar.....	30 do .....	4	1
Rix Dollar .....	90 Kreuzers.....	3	0
Florin .....	60 do .....	2	0½

\* These terms are also applied to designate the parts of a dollar: haou is a tenth, and size a hundredth part.

† In money, the value of the Candareen varies from 10 to 13 or 14 copper cash, and hence the mace varies from 100 to 140, and the dollar from 720 to 1000 cash; but in weight, whether of silver or of any other article, le or cash always continues the same integral part of a Candareen.

‡ This is the general estimate, made by the Government, and the Lazar change for Dollars to small amount, 7 Mace. 2 Candareen being the full weight of a good and unutilated Dollar; but in consequence of the system adopted by all Chinese merchants and shopkeepers, stamping every Dollar they pay out, the weight very speedily diminishes, until the Dollar is eventually broken into pieces, in which state it is melted into sycee.

## AUSTRIA.

			s.	d.
Gold Florin .....	15	Batzen .....	2	4
Batzen .....	4	Kreuzers .....		1 6
Groschen .....	14	Pennings .....		1 43
Kreuzer .....	4	do .....		41

## NORWAY.

			s.	d.
1 Specie Dollar ....	....	....	4	5
1 Mare ( $\frac{1}{2}$ Dollar) ..	....	....	0	5 6
1 Skilling ( $\frac{1}{20}$ Dollar)	....	....	0	1 $\frac{1}{2}$ f.
1 Paper Sp. Dollar .....	.....	.....	3	11 14 d.

## DENMARK.

1 Rigsbank Dollar ....	..	....	2	2 $\frac{1}{2}$
200 R. D.=300 marcs banco of	Hamburg,	independent		
of the agio on banco.				

## FRANCE.

			s.	d.
A Louis .....	....	....	16	5
6 Livre Piece ..	....	....	5	0
5 Franc Piece ....	....	....	4	2
3 Livre Piece ....	....	....	2	6
60 Sous Piece ....	....	....	1	3
Franc .. 20 Sous....	....	....	0	10
Demi Franc.....19 do.	.....	.....	0	5
15 Sous Piece ....	....	....	0	7 $\frac{1}{2}$
6 Sous Piece ....	....	....	0	3
Double Sous.....	....	....	0	1
6 Liard Piece ....	....	....	0	0 $\frac{3}{4}$
Sous ....	....	....	0	0 $\frac{1}{2}$
2 Liards ....	....	....	0	0 $\frac{1}{4}$
A Liard ....	....	....	0	0 $\frac{1}{8}$

## FLANDERS.

Pound Flem. or 240	Grotes	..	9	
Ducat .. 17 $\frac{1}{2}$	Scalins	..	7	9 $\frac{1}{2}$
Horin .. 40	Grotes	..	1	6
Scalin .. 6	Petards	..	0	5
Petrad .. 2	Grotes	..	0	1 $\frac{1}{2}$
Grote .. 8	Pennings	..	0	0 $\frac{1}{2}$
Urche .. 4	Do..	..	0	0
A Penning..	..	..	0	0

## HAMBURG.

				s.	d.
Ducat	.... or	6½	Marc	9	4½
Rix Dollar	....	3	Do.	4	6½
Marc	....	16	Schillings	1	6
Schillings	....	12	Penning	0	1½

## HOLLAND.

Ducat	.....or	105	Stivers	9	2
Guilder	.....	60	Do.	5	3
Rix Dollar	.....	50	Do.	4	4½
Florin	.....	20	Do.	1	9
Scalin	.....	6	Do	0	6½
Stiver	.....	2	Grotes	0	1
Grote	.....	8	Pennings	0	0½

## PRUSSIA.

Frederick D'or,	or	5	Rix Dollars	17	6
Ducat	... ..	8	Florins	9	4
Rix Dollar	.....	90	Groschens	3	6
Florin	.....	30	Do.	1	2
Groschen	.....	3	Schelons	0	0½

## RUSSIA AND MUSCOVY.

Xervonix,	... or	2	Rubles	9	0
Ruble	.. ..	100	Cupees	4	6
Poltin	.. ..	50	Do.	2	3
Polposin	.. ..	25	Do.	1	1½
Grievene	.. ..	10	Do.	0	5½
Atlin	.. ..	3	Do.	0	1½
Cupee	.. ..	..	....	0	0½

## POLAND.

Frederick D'or,	....or	5	Rix Dollar	17	6
Ducat	....	8	Florins	9	4
Rix Dollar	....	90	Groschens	3	6
Florin	....	30	Do.	1	2
Groschen	....	3	Schelons	0	0½
Schelon	....	....	....	0	0

## SWEDEN.

Ducat	....or	2	Rix Dollars	9	4
Rix Dollar	....	3	Carolines	4	8
Silver Dollar	....	4	Copper Dollar	1	11½
Caroline	....	6	Copper Marcs	1	2
Copper Dollar	....	5	Do.	0	7½
Silver Marc	....	3	Do.	0	4
Copper Marc	....	4	Stivers	0	1½
A Stiver	....	....	....	0	0½



## GENOA.

			s.	d.
Pistole .....	or 20	Lires	14	4
Genouine .....	6	Testoons	6	5½
Rezzo of Ex .....	155	Solidi	4	1½
Croisade ... ..	3	Lires	3	7½
Testoon .....	30	Solidi	1	1
Lire .....	20	Do.	0	8½
Chevalet .....	4	Do.	0	1½
Solidi .....	12	Dinari	0	0½
Dinari .....	.....	.....	0	0

## VENICE.

Chequin .. or	16½	Lires ..	9	2
Ducat or Ex..	24	Gross ..	4	4
Ducat Current	120	Solidis ..	3	5½
Testoon .. ..	3	Julios ..	1	6
Lire .. ..	20	Solidis ..	0	6½
Julio .. ..	18	Do. ....	0	6
Grosso .. ..	6½	Do. ....	0	2½
Solidi .. ..	12	Picolis ..	0	0½
A Picoli .. ..	.....	.....	0	0

## LEGHORN.

Pistole .. ..	or 22	Lires ..	15	2½
Ducat .. ..	7½	Do. ....	5	2½
Piaster of Ex	6	Do. ....	4	2
Lire .. ..	10	Solidi ..	0	8½
Paoli.. ..	28	Gratia ..	0	6
Gratia .. ..	9	Quatrina	0	0
Quatrina .. ..	4	Denari..	0	0
Denari .. ..	.....	.....	0	0

## PORTUGAL.

Joanez .. ..	or 64	Testoons	36	0
Mœda .. ..	48	Do. ....	27	0½
Milre .. ..	10	Do. ....	5	7
New Crusade	34	Vintins...	2	8½
Crusade of Ex	4	Testoons	5	3
Testoon .. ..	5	Tintins ..	0	6½
Vintln .. ..	20	Rese .. ..	0	1½
A Ree .. ..	.....	.....	0	0

## FRENCH WEIGHTS AND MEASURES.

<i>French.</i>	<i>English.</i>
1 Millimètre =	·0393708 inches.
1 Centimètre "	·393708 "
1 Decimètre "	3·93708 "
1 Mètre "	39·37079 " or 3·2809 ft.
1 Kilomètre "	1093·64 yds. or 62138 miles.
70 Yards "	64 mètres.
210 Feet "	64 mètres.
1 Inch "	25·4 millimètres.
1 Foot "	·3048 mètres.
1 Yard "	·9144 mètres.

The unit of length is the *Mètre*, or 10 millionth part of the distance from the Pole to the Equator, as ascertained by measurement of arcs of the Meridian. The Metrical system was established in France by law in 1795.

For Retail Trade the "*Système usuel*" was made legal in 1812, and enforced in 1816. By this:

- 1 Toise = 2 mètres.
- 1 Pied =  $\frac{1}{3}$  mètres or 1·07 feet.
- 1 Aune = 12 Décimètre or 47 $\frac{1}{2}$  inches.

The "*Ancient French Pied*" was 1·069 English feet, the *Toise* 6·395 feet, the *Aune* 46·85 inches and the *Lieu de Poste* 2·42 English miles. The *Line* was  $\frac{1}{4}$  of the ponce (inch) and = ·089 English inches.

#### SUPERFICIAL MEASURE.

- 1 Centiare = 1·960 sq. Yards.
- 1 Are (sq. Decamètre,) = 1076·44 sq. Feet.
- 1 Hectare = 2471 Acres.
- 36 Sq. Yards = 30 Sq. Metres.
- 42 Acres = 17 Hectares.

#### SOLID MEASURE.

- 1 Decistère = 3·517 Cubic Feet.
- 1 Stere (Cubic Mètre,) = 35·317 Cub. Ft. or 1·308 Cubic Yard

#### MEASURES OF CAPACITY.

The *Litre* is the unit of all measures of capacity. It is a Cubic Décimètre.

- 1 Litre =  $\left\{ \begin{array}{l} 61·028 \text{ Cubic Inches.} \\ 220·0968 \text{ Imp. Gallons.} \\ 1·7608 \text{ " Pints.} \\ 2·1135 \text{ Old Wine Pints.} \end{array} \right.$
- 1 Hectolitre =  $\left\{ \begin{array}{l} 3·5317 \text{ Cubic Feet.} \\ 22·097 \text{ Imp. Gallons.} \\ 2·7512 \text{ " Bushels.} \\ 2·84 \text{ Winchester Bushel.} \end{array} \right.$

The *Boisson* of the "Système usuel" = 12½ Litres or 11 Imperial Quarts.

11 Imp. Quarts = 32 Hectolitres.

11 " Gallons " 50 Litres.

8·8 " Pints " 5 "

### WEIGHTS.

The unit of weight is the *Gramme*; or a cubic centimètre or distilled water at its greatest density.

<i>French.</i>		<i>English.</i>
1 Milligramme	=	·015434 Grains.
1 Centigramme	=	·15434 "
1 Desigramme	=	·15424 " }
1 Gramme	=	15·434 "
1 Hectogramme	=	3·527 oz. Avoir.
1 Killogramme	=	2·20486 lbs. "
1 Quintal Métrique	=	220·486 lbs. "
46 Grammes.	=	76 Grains
85 Grammes.	=	3 oz. Avoir.
34 Killogramme.	=	75 lbs. Avoir.

By the "Système usuel" 1 Livre =  $\frac{1}{2}$  a Killogramme, or 7717 English Grains, or 100 French weight. 1 Ounce ( $\frac{1}{16}$  livre) = 482·3 English Grains.

By the "Ancient" weight, the Livre or Poids de marc = 7555 English Grains. The Quintal of 100 Livres = 107·928 lbs. Avoir. The Livre was divided into 16 ounces, or 128 Grains, or 9216 French gross.

*Deca* prefixed means 10 times; *Déci* the 10th part. *Hecto* prefixed means 100 times; *Centi* the 100th part; *Kilo* prefixed means 1,000 times; *Mille* the 1,000th part, and *Myria* prefixed means 10,000 times.

### THERMOMETERS.

To reduce Reaumer to Fahrenheit, multiply  $\frac{2}{3}$  and add 32°.

Do. Centigrade to Fahrenheit, multiply by  $\frac{9}{5}$  and add 32°.

Do. Fahrenheit to Reaumer, deduct 32° and then multiply by  $\frac{4}{5}$ .

Do. Fahrenheit to Centigrade, deduct 32° and then multiply by  $\frac{5}{9}$ .

TABLE SHOWING THE RELATIVE VALUE OF BRITISH AND FOREIGN  
ROAD MEASURES.

NAMES OF PLACES.	MEASURE.	Number equal to 100 English miles.	NAMES OF PLACES.	MEASURE.	Number equal to 100 English miles.
Arabia ..	Mile ... ..	81·939	Hungary ..	Mile .. ..	19·313
Brabant ..	League .. ..	28·966	Ireland ..	Mile .. ..	78·571
China ..	Li .. ..	78·481	Netherlands ..	Mile Metrical	161·024
Dantzic ..	Mile .. ..	20·767	Persia ..	Parasang ..	28·918
Denmark ..	Mile .. ..	21·348	Poland ..	Mile Long ..	21·725
England ..	Mile .. ..	100	.. .. .	Mile Short ..	28·966
.. .. .	Mile Geogra- phical ..	86·943	Portugal ..	League .. ..	26·035
Flanders ..	League .. ..	25·641	Prussia ..	Mile .. ..	21·367
France ..	Kilometre ..	161·024	Rome ..	Mile .. ..	108·108
.. .. .	League of 200 toises ..	41·285	.. .. .	Mile Metrical	161·024
.. .. .	League of 25 to the degree	36·214	.. .. .	Mile Geogra- phical ..	86·913
.. .. .	Leag., Marine	28·966	Russia ..	Werst .. ..	150·814
Germany ..	Mile Geogra- phical ..	21·725	Scotland ..	Mile .. ..	88·709
.. .. .	Mile Short ..	17·381	Spain ..	Leag. common	23·732
.. .. .	Mile Long ..	25·659	.. .. .	Leag. Judicial	37·072
Hamburg ..	Mile .. ..	21·348	Sweden ..	Mile .. ..	15·042
Hanover ..	Mile .. ..	15·226	Switzerland ..	Mile .. ..	19·228
Holland ..	Mile .. ..	21·725	Tuscany ..	Mile .. ..	97·345
			Turkey ..	Berrie .. ..	96·385
			.. .. .	.. .. .	.. ..
			.. .. .	.. .. .	.. ..

A Table showing the increase of compound interest, at several rates per  
cent. A sum becomes

Rates per cent.	Twice as much in about.		4 times as much in about.		8 times as much in about.		16 times as much in about.		32 times as much in about.		64 times as much in about.	
	Years.	Days.	Years.	Days.	Years.	Days.	Years.	Days.	Years.	Days.	Years.	Days.
5 12	74	28	14	42	222	56	296	71	5	85	79	
6 11	326	23	288	35	250	47	211	59	173	71	135	
7 10	87	20	174	30	261	40	348	51	70	61	157	
8 9	24	18	4	27	6	36	9	45	1	54	19	
9 8	15	16	30	24	45	32	60	40	75	48	90	
10 7	96	14	192	21	288	29	19	36	115	43	211	
11 6	230	13	36	19	326	26	192	33	57	39	288	
12 6	40	12	80	18	120	24	160	30	200	36	240	

## THE ENGLISH STYLE.

Considerable difficulty is often felt by persons unaccustomed to Antiquarian Literature, in understanding the alteration in the Style; and likewise in exactly comprehending the year intended to be expressed when written,

167 $\frac{1}{2}$ —172 $\frac{1}{2}$

The following short explanation is therefore submitted with the hope of rendering the subject perfectly clear.

Previous to September, 1752, the Civil or Legal year in this country commenced on the day of the Annunciation, the 25th of March, whilst the Historical year began, as at present, on the day of the Circumcision, the 1st of January; thus a confusion was created in describing the year between the 1st of January, and the 25th of March, for Civilians called each day within that period, one year earlier than Historians. For example, the former wrote

January 7th, 1658,

and the latter

January 7th, 1659,

though both described the 25th of the following March, and all the ensuing months, as in the year 1659. To prevent errors, that part of each year is usually written agreeably to both calculations, by placing two figures at the end; the *upper* being the Civil or Legal, and the *lower* the Historical year; thus

February 3, 164 $\frac{1}{2}$  Civil or Legal year.  
Historical year.

Hence whenever the year is so written, the lower figure always indicates the year now used in our Calendar.

The alteration in the Calendar, which formed what is usually called the Old and New Style, took place on the 2nd of September, 1752, on which day the Old Style ceased, and the next day, instead of being called the 3rd, became the 14th of September.\* The cause of this change is well explained in the following extract from a popular work.

"The Calendar was further improved by Julius Cæsar, who finding that the Sun performed his course in 365 $\frac{1}{4}$  days nearly, gave 365 days to each three years, but to every fourth year, 365 days, adding a day before the 6th of the Calends of February, which was then reckoned twice; and hence, from his sextus, we have the term Bissextile, or Leap-year. But the Astronomers concerned in reforming the Calendar under Pope Gregory XIII. observing, that in four years the bissextile added 44 m. more than the real course of the Sun, and finding, that in 133 years this would cause a difference of a day, directed that in the course of every 400 years there should be three sextiles retrenched, the years expressing the centuries not being Leap years, unless divisible by 4, thus 1600 and 2400 are bissextile, but 1700, 1800, and 1900, are not. This improvement was adopted in England in 1752 in pursuance of an act of Parliament, in which it was ordered, that the day next following

\* In Scotland the year was ordered to commence on the 1st of January instead of the 25th of March, by Proclamation, dated November 27th, 1599.

the 2nd of September should be accounted the 14th, the omission of the intermediate days, causing the difference between the Old *Style* and the *New*."

By the same Act of Parliament, the commencement of the Civil year was changed from the 25th of March to the 1st of January.

### TABLE OF REGNAL YEARS.

#### GEORGE THE FIRST.

1	{ 1. Aug. 1714, 31. July 1715.	6	{ 1. Aug. 1719, 31. July 1720.	10	{ 1. Aug. 1723, 31. July 1724.
2	{ 1. Aug. 1715, 31. July 1716.	7	{ 1. Aug. 1720, 31. July 1721.	11	{ 1. Aug. 1724, 31. July 1725.
3	{ 1. Aug. 1716, 31. July 1717.	8	{ 1. Aug. 1721, 31. July 1722.	12	{ 1. Aug. 1725, 31. July 1726.
4	{ 1. Aug. 1717, 31. July 1718.	9	{ 1. Aug. 1722, 31. July 1723.	13	{ 1. Aug. 1726, 11. June 1727.
5	{ 1. Aug. 1718, 31. July 1719.				

#### GEORGE THE SECOND.

1	{ 11. June 1727, 10. June 1728.	7	{ 11. June 1733, 10. June 1734.	13	{ 11. June 1739, 10. June 1740.
2	{ 11. June 1728, 10. June 1729.	8	{ 11. June 1734, 10. June 1735.	14	{ 11. June 1740, 10. June 1741.
3	{ 11. June 1729, 10. June 1730.	9	{ 11. June 1735, 10. June 1736.	15	{ 11. June 1741, 10. June 1742.
4	{ 11. June 1730, 10. June 1731.	10	{ 11. June 1736, 10. June 1737.	16	{ 11. June 1742, 10. June 1743.
5	{ 11. June 1731, 10. June 1732.	11	{ 11. June 1737, 10. June 1738.	17	{ 11. June 1743, 10. June 1744.
6	{ 11. June 1732, 10. June 1733.	12	{ 11. June 1738, 10. June 1739.	18	{ 11. June 1744, 10. June 1745.

19	{ 11. June 1745, 10. June 1746.	25	{ 11. June 1751, 10. June 1752.	30	{ 11. June 1756, 10. June 1757.
20	{ 11. June 1746, 10. June 1747.	26	{ 11. June 1752, 10. June 1753.	31	{ 11. June 1757, 10. June 1758.
21	{ 11. June 1747, 10. June 1748.	27	{ 11. June 1753, 10. June 1754.	32	{ 11. June 1758, 10. June 1759.
22	{ 11. June 1748, 10. June 1749.	28	{ 11. June 1754, 10. June 1755.	33	{ 11. June 1759, 10. June 1760.
23	{ 11. June 1749, 10. June 1750.	29	{ 11. June 1755, 10. June 1756.	34	{ 11. June 1760, 25. Oct. 1760.
24	{ 11. June 1750, 10. June 1751.				

## GEORGE THE THIRD.

1	{ 25. Oct. 1760, 24. Oct. 1761.	12	{ 25. Oct. 1771, 24. Oct. 1772.	23	{ 25. Oct. 1782, 24. Oct. 1783.
2	{ 25. Oct. 1761, 24. Oct. 1762.	13	{ 25. Oct. 1772, 24. Oct. 1773.	24	{ 25. Oct. 1783, 24. Oct. 1784.
3	{ 25. Oct. 1762, 24. Oct. 1763.	14	{ 25. Oct. 1773, 24. Oct. 1774.	25	{ 25. Oct. 1784, 24. Oct. 1785.
4	{ 25. Oct. 1763, 24. Oct. 1764.	15	{ 25. Oct. 1774, 24. Oct. 1775.	26	{ 25. Oct. 1785, 24. Oct. 1786.
5	{ 25. Oct. 1764, 24. Oct. 1765.	16	{ 25. Oct. 1775, 24. Oct. 1776.	27	{ 25. Oct. 1786, 24. Oct. 1787.
6	{ 25. Oct. 1765, 24. Oct. 1766.	17	{ 25. Oct. 1776, 24. Oct. 1777.	28	{ 25. Oct. 1787, 24. Oct. 1788.
7	{ 25. Oct. 1766, 24. Oct. 1767.	18	{ 25. Oct. 1777, 24. Oct. 1778.	29	{ 25. Oct. 1788, 24. Oct. 1789.
8	{ 25. Oct. 1767, 24. Oct. 1768.	19	{ 25. Oct. 1778, 24. Oct. 1779.	30	{ 25. Oct. 1789, 24. Oct. 1790.
9	{ 25. Oct. 1768, 24. Oct. 1769.	20	{ 25. Oct. 1779, 24. Oct. 1780.	31	{ 25. Oct. 1790, 24. Oct. 1791.
10	{ 25. Oct. 1769, 24. Oct. 1770.	21	{ 25. Oct. 1780, 24. Oct. 1781.	32	{ 25. Oct. 1791, 24. Oct. 1792.
11	{ 25. Oct. 1770, 24. Oct. 1771.	22	{ 25. Oct. 1781, 24. Oct. 1782.	33	{ 25. Oct. 1792, 24. Oct. 1793.

34	{ 25. Oct. 1793, 24. Oct. 1794.	40	{ 25. Oct. 1799, 24. Oct. 1800.	46	{ 25. Oct. 1805, 24. Oct. 1806.
35	{ 25. Oct. 1794, 24. Oct. 1795.	41	{ 25. Oct. 1800, 24. Oct. 1801.	47	{ 25. Oct. 1806, 24. Oct. 1807.
36	{ 25. Oct. 1795, 24. Oct. 1796.	42	{ 25. Oct. 1801, 24. Oct. 1802.	48	{ 25. Oct. 1807, 24. Oct. 1808.
37	{ 25. Oct. 1796, 24. Oct. 1797.	43	{ 25. Oct. 1802, 24. Oct. 1803.	49	{ 25. Oct. 1808, 24. Oct. 1809.
38	{ 25. Oct. 1797, 24. Oct. 1798.	44	{ 25. Oct. 1803, 24. Oct. 1804.	50	{ 25. Oct. 1809, 24. Oct. 1810.
39	{ 25. Oct. 1798, 24. Oct. 1799.	45	{ 25. Oct. 1804, 24. Oct. 1805.		
51	{ 25. Oct. 1810, 5. Feb. 1811, 24. Oct. 1811.	55	{ 25. Oct. 1814, 24. Oct. 1815.	58	{ 25. Oct. 1817, 24. Oct. 1818.
52	{ 25. Oct. 1811, 24. Oct. 1812.	56	{ 25. Oct. 1815, 24. Oct. 1816.	59	{ 25. Oct. 1818, 24. Oct. 1819.
53	{ 25. Oct. 1812, 24. Oct. 1813.	57	{ 25. Oct. 1816, 24. Oct. 1817.	60	{ 25. Oct. 1819, 29. Jan. 1820.
54	{ 25. Oct. 1813, 24. Oct. 1814.				

## GEORGE THE FOURTH.

Reign, began January 29, 1830.

ended June 26, 1830.

1.	{ Jan. 29, 1820, Jan. 28, 1821.	5	{ Jan. 29, 1824, Jan. 28, 1825.	9	{ Jan. 29, 1828, Jan. 28, 1829.
2	{ Jan. 29, 1821, Jan. 28, 1822.	6	{ Jan. 29, 1825, Jan. 28, 1826.	10	{ Jan. 29, 1829, Jan. 28, 1830.
3.	{ Jan. 29, 1822, Jan. 28, 1823.	7	{ Jan. 29, 1826, Jan. 28, 1827.	11	{ Jan. 29, 1830, Jan. 26, 1830.
4	{ Jan. 29, 1823, Jan. 28, 1824.	8	{ Jan. 29, 1827, Jan. 28, 1828.		



**WILLIAM THE FOURTH.**

Reign, began 26th June 1830.

ended 20th June 1837.

1	{ June 26, 1830, June 25, 1831.	4	{ June 26, 1833, June 25, 1834.	6	{ June 26, 1835, June 25, 1836.
2	{ June 25, 1831, June 26, 1832.	5	{ June 26, 1834, June 25, 1835.	7	{ June 26, 1836, June 25, 1837.
3	{ June 25, 1832, June 26, 1833.				

**VICTORIA.**

Reign began 20th June 1837.

1	{ June 20, 1837, June 19, 1838.	9	{ June 20, 1845, June 19, 1846.	17	{ June 20, 1853, June 19, 1854.
2	{ June 20, 1838, June 19, 1839.	10	{ June 20, 1846, June 19, 1847.	18	{ June 20, 1854, June 19, 1855.
3	{ June 20, 1839, June 19, 1840.	11	{ June 20, 1847, June 19, 1848.	19	{ June 20, 1855, June 19, 1856.
4	{ June 20, 1840, June 19, 1841.	12	{ June 20, 1848, June 19, 1849.	20	{ June 20, 1856, June 19, 1857.
5	{ June 20, 1841, June 19, 1842.	13	{ June 20, 1849, June 19, 1850.	21	{ June 20, 1857, June 19, 1858.
6	{ June 20, 1842, June 19, 1843.	14	{ June 20, 1850, June 19, 1851.	22	{ June 20, 1858, June 19, 1859.
7	{ June 20, 1843, June 19, 1844.	15	{ June 20, 1851, June 19, 1852.	23	{ June 20, 1859, June 19, 1860.
8	{ June 20, 1844, June 19, 1845.	16	{ June 20, 1852, June 19, 1853.	24	{ June 20, 1860, June 19, 1861.

**FEASTS.**

THE VIGIL OR EVE of a feast, is the day before it occurs. Thus the Vigil of the feast of St. John the Baptist is the 23rd of June. If the feast day falls upon a Monday, then the Vigil or Eve is kept upon the Saturday preceding.

**THE MORROW** of a feast, is the day following ; thus the feast of All Souls is November 2nd, and the Morrow of All Souls is consequently the 3rd of November.

**THE OCTAVE OR UTAS** of each feast, is always the eighth day after it occurs ; for example, the feast of St. Hillary, is the 13th of February, hence the Octave of St. Hillary, is the 20th of that month.

**IN THE OCTAVES**, means within the eight days following any particular feast.

### MOVEABLE FEASTS.

**ALL the Moveable Feasts** depend upon

**SHROVE TUESDAY**, which is the next Tuesday after the first change in the Moon, commonly called the New Moon, in the month of February. If the Moon should change upon a Tuesday, the next Tuesday following is Shrove Tuesday.

**ADVENT SUNDAY**, is the nearest Sunday to the feast of St. Andrew, November 30th, whether before or after.

**ASCENSION DAY, or HOLY THURSDAY**, is the Thursday in Rogation Week, i. e. the Week following Rogation Sunday.

**ASH WEDNESDAY**, or the first day in Lent, is the day after Shrove Tuesday.

**CARLE, or CARE SUNDAY**, or the fifth Sunday in Lent, is the fifth Sunday after Shrove Tuesday.

**CORPUS CHRISTI, or BODY OF CHRIST**, is a festival kept on the Thursday after Trinity Sunday ; and was instituted in the year 1264.

**EASTER DAY. THE PASCHAL SABBATH. THE EUCHARIST, or LORD'S SUPPER**, is the seventh Sunday after Shrove Tuesday, and is always the first Sunday after the first Full Moon, which happens on or next after the 21st of March.

**EASTER MONDAY.** } are the Monday and Tuesday following Easter  
**EASTER TUESDAY.** } ter day.

**EMBER DAYS**, are the Wednesdays, Fridays, and Saturdays, after the first Sunday in Lent ; after the Feast of Pentecost ; after Holy Rood Day, or the Feast of the Exaltation of the Holy Cross, viz. 14th September ; and after St. Lucia's day, viz. 15th December.

**EMBER WEEKS**, are those weeks in which the Ember days fall.

**THE EUCHARIST.** *Vide* Easter Day.

**GOOD FRIDAY**, is the Friday in Passion Week, and the next Friday before Easter day.

**HOLY THURSDAY.** *Vide* Ascension day.

**THE FAST OF LENT**, is from Ash Wednesday, to the Feast of Easter, viz. forty days.

**LORD'S SUPPER.** *Vide* Easter day.

**LOW SUNDAY**, is the Sunday next after Easter day.

**MAUNDAY THURSDAY**, is the day before Good Friday.

**MIDLINT**, or the fourth Sunday in Lent, is the fourth Sunday after Shrove Tuesday.

**PALM SUNDAY**, or the sixth Sunday in Lent, is the sixth Sunday after Shrove Tuesday.

**PASCHAL SABBATH.** *Vide* Easter day.

**PASSION WEEK**, is the Week next ensuing after Palm Sunday.

**PENTECOST** or **WHIT SUNDAY**, is the fiftieth day and seventh Sunday after Easter day.

**QUINQUAGESIMA SUNDAY**, is so named from its being about the fiftieth day before Easter. It is also called **SHROVE SUNDAY**.

**RELICK SUNDAY**, is the third Sunday after Midsummer-day.

**ROGATION SUNDAY**, is the fifth Sunday after Easter day.

**ROGATION DAYS** are the Monday, Tuesday, and Wednesday following Rogation Sunday.

**SHROVE TUESDAY.** *Vide* p. 76.

**SHROVE SUNDAY**, is the Sunday next before Shrove Tuesday. It is also called **QUINQUAGESIMA SUNDAY**.

**SEPTUAGESIMA SUNDAY**, so called from its being about the seventieth day before Easter, is the third Sunday before Lent.

**SEXAGESIMA SUNDAY**, is the second Sunday before Lent, or the next to Shrove Sunday so called as being about the sixtieth day before Easter.

**QUADRAGESIMA SUNDAY**, the first Sunday in Lent, or first Sunday after Shrove Tuesday.

**TRINITY SUNDAY**, or the **FEAST of the HOLY TRINITY**, is the next Sunday, after Pentecost or Whitsuntide.

**WHIT SUNDAY.** *Vide* Pentecost.

**WHIT MONDAY.** } are the Monday and Tuesday following Whit Sun-  
**WHIT TUESDAY.** } day.

**WHITSUNTIDE**, is the three days above-mentioned.

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ALPHABETICAL  
CALENDAR OF SAINTS' DAYS,  
AND  
OTHER FESTIVALS.

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Abdon and Seni, St.	..	..	..	..	July 30.
Acheley, St. and Panerace.	Epiphanius	Bishop	..	..	May 22.
Adelbert, St.	..	..	..	..	June 25.
Adelgune, Translation of St. Barnard and	..	..	..	..	May 26.
Adelme, St.	..	..	..	..	Mar. 31.
Adelme, St.	..	..	..	..	May 23.
Adrian, St. 7th	..	..	..	..	Mar. 4.
Adulphus, St. and Botolph	..	..	..	..	June 17.
Advent Sunday.	<i>Vide the Moveable Feasts.</i>				
Agapite, Martyr. Helen	..	..	..	..	Aug. 18.
Agatha, St. Virgin	..	..	..	..	Feb. 5.
Agnes, St.	..	..	..	..	Jan. 21.
Agnes, St. 2nd	..	..	..	..	Jan. 28.
Alban, St. Martyr	..	..	..	..	June 22.
Alexander, St.	..	..	..	..	Feb. 26.

Alexis, St. Kenelme and	July 17.
Alfwald, St.	Sept. 23.
All Saint's Day, or All Hallows, or Holymas	Nov. 1.
All Soul's Day	Nov. 2.
Alphege, St. Bishop	April 19.
Amandus. Vedastus Dorothy St.	Feb. 6.
Ambrose, St., and St. Isidore	April 4.
Ambrose, St. Bishop. Octaves of St. Andrew	Dec. 7.
Anastasius, St. Bishop	April 27.
Andrew, St. the Apostle	Nov. 30.
Andrew St. Octaves of—St. Ambrose Bishop	Dec. 7.
Anne, St.—Vegilius, Bishop	July 7.
Angulus, St. Bishop	Feb. 7.
Anicete, St.	April 27.
Annunciation of our Lady	Mar. 25.
Anthonin, St. Apinachy	May 10.
Anthony, St.	Jan. 17.
Anthony and Filicula	June 13.
Apolin, St.	Feb. 9.
Apolin, St. Bishop	July 23.
Aquinas, St. Thomas. St. Perpetua	Mar. 7.
Archade, St. the Martyr	Jan. 12.
Arkenwald, St.	April 30.
Arnulphe, St. Bishop—Rosina	July 18.
Ascension-day. <i>Vide the Moveable Feasts.</i>	
Ash-Wednesday. <i>Vide the Moveable Feasts.</i>	
Assumption of our Lady	Aug. 15.
Athanasius, St. Bishop	May 2.
Audactus, St. and Felix	Aug. 30.
Augustine, St. Bishop. St. Barnard	Aug. 21.
Augustinus	Aug. 28.
Austin, St. of England	May 26.
Austin, St. Conversion of	May 5.
Austrebert, St. Virgin	Oct. 20.
Babylas, St. Bishop. St. Timothy.	Jan. 24.
Barbary, St. Virgin. St. Osmond	Dec. 4.
Barbatus, St.	Feb. 19.
Barnabas, St. Apostle	June 11.
Barnard, St. Translation of, and Adalgune	May 16.
Barnard, St. St. Augustine, Bishop	Aug. 21.
Barnardine, St. Ethelbert	May 20.
Bartholomew, St. the Apostle	Aug. 24.
Basil, St.	Mar. 22.
Basil, St. Bishop. St. Clere or St. Cletus, Bishop	April 26.
Basild, St. Bishop. Valerius	June 14.
Basild, St. Confessor	June 12.
Basilde, St.	Jan. 30.
Becket, St. Thomas & Translation of	July 7.
Cede, St.	May 27.
Beheading of St. John the Baptist	Aug. 29.
Benet, or Benedict, St.	Mar. 23.

Bennet, St. Translation of. Pius	..	..	..	July 11.
Bernard, St. Abbot	..	..	..	Aug. 20.
Bertine, St. Zacharias. Martini	..	...	..	Sept. 5.
Bibiana	..	..	..	Dec. 2.
Blase, St.	..	..	..	Feb. 3.
Blessed Virgin. <i>Vide</i> Lady.				
Boisil, St.	..	..	..	July 5.
Bonaventura, Cardinal. St. Private	..	..	..	July 13.
Bonaventura. St. Revell	..	...	...	July 14.
Boniface, St. Bishop	..	..	..	Mar. 16.
Boniface, St.	..	..	..	May 14.
Boniface, St. Bishop	..	..	..	June 5.
Bosel, St.	..	..	..	Sept. 24.
Botolph, St.	..	..	..	June 17.
Brandon, St.	..	..	..	May 15.
Braulia, St.	..	..	..	Mar. 26.
Brethren, Six Martyred	..	..	..	July 10.
Briavel, St.	..	..	..	Aug. 7.
Brice, St. or St. Britius	..	..	..	Nov. 13.
Bridget, St. Ignatius, Bishop and Martyr	..	..	..	Feb. 1.
Calix, St.	..	..	..	Oct. 14.
Candlemas Day. Purification of our Lady	..	..	..	Feb. 2.
Caraunus, Martyr. St. Germane	..	..	..	May 28.
Carle or Care Sunday. <i>Vide</i> the Moveable Feasts				
Catherine, St. Virgin	..	..	..	Nov. 25.
Ceadwold, St.	..	..	..	April 20.
Cecilia, St.	..	..	..	Nov. 22.
Cecilius, St.	..	..	..	June 3.
Cedda, St.	...	..	..	Jan. 7.
Chad, St.	..	..	..	Mar. 2.
Charles the Great, or Charlemagne	..	..	..	Jan. 29.
Childermas day, or Innocents' day	..	..	..	Dec. 28.
Chrisogonus, St. Martyr	..	..	..	Nov. 24.
Christ, Circumcision of. New Year's day	..	..	..	Jan. 1.
Christ, Conception of, or Annunciation of our Lady	..	..	..	Mar. 25.
Christ, Transfiguration of,	..	..	..	Aug. 6.
Christine, Virgin St.	..	..	...	July 24.
Christmas Day	..	..	..	Dec. 25.
Chrys, John, Bishop	..	..	..	Jan. 27.
Ciriac and Socius, St.	..	..	..	Aug. 8.
Clare, St. Virgin	..	..	..	Aug. 12.
Clarus, St. and Vitalis	..	..	..	Nov. 4.
Claudy, St.	..	..	..	Dec. 24.
Clement, St. Pope and Martyr	..	..	..	Nov. 23.
Clere, St. or St. Cletus, Bishop	..	..	..	April 26.
Climachus, St. John	..	...	..	Mar. 30.
Clitane, St.	..	..	..	Aug. 19.
Columb, St. and Yury	..	..	...	Oct 23.
Commemoration of St. Paul ..	..	..	..	June 30.
Conception of our Lady	..	..	..	Dec. 8.
Conrade, St.	..	..	...	Nov. 26.

Conversion of St. Paul	..	..	..	Jan. 25.
Cordula, St.	..	..	..	Oct. 22.
Corona, Quatuor	..	..	..	Nov. 8.
Corpus Christi.	<i>Fide the Moveable Feasts.</i>			
Cosmin, St. and Damian	..	..	..	Sept. 27.
Crispin, St. and Crispianus.	Salome	..	..	Oct. 25.
Cross Holy, Exaltation of the, or Holy Rood Day	..	..	..	Sept. 14.
Cross Holy, Invention of the.	St. Basil, Bishop	..	..	April 3.
Crown of Thorns, Feast of	..	..	..	May 4.
Cuthburge, St. Virgin	..	..	..	Aug. 31.
Cuthbert, St.	..	..	..	Mar. 20.
Cuthbert, St. Translation of, and St. Theodosia	..	..	..	Sept. 4.
Cyprian, St. and Justine	..	..	..	Sept. 26.
Cyril, St.	..	..	..	May 20.
Damassin, St. Zantippa	..	..	..	Dec. 11.
Damian, St. Peter	..	..	..	Feb. 23.
David, St.	..	..	..	Mar. 1.
David, St. King. Translation of St. James	..	..	..	Dec. 30.
Dedication of St. Michael	..	..	..	Sept. 29.
Desiderius, St. Martyr	..	..	..	May 23.
Dionice, St. or Dionisius, or Denice	..	..	..	Oct. 9.
Docunus	..	..	..	Nov. 5.
Dominic, St.	..	..	..	Aug. 4.
Dorothy. Vedastus. Amandus	..	..	..	Feb. 9.
Dunstan, St.	..	..	..	May 19.
Eadburge, Virgin St. St. Tibba	..	..	..	Dec. 14.
Ealswithe, St.	..	..	..	Nov. 27.
Eanswide, St.	..	..	..	Sept. 12.
Easter-Day.	<i>Fide the Moveable Feasts.</i>			
Easter-Monday.	<i>Fide the Moveable Feasts.</i>			
Easter-Tuesday.	<i>Fide the Moveable Feasts.</i>			
Eata, St.	..	..	..	Oct. 26.
Ebba, St.	..	..	..	April 1.
Edburge, St.	..	..	..	June 15.
Edith and Euphemia, St.	..	..	..	Sept. 16.
Edmund, Translation of St.	..	..	..	June 9.
Edmund, St. Archbishop	..	..	..	Nov. 16.
Edmund, St. King and Martyr	..	..	..	Nov. 20.
Edward, the Confessor, St. King of the West Saxons	..	..	..	Mar. 18.
Edward the Confessor, St. King of the West Saxons	<i>Translation of. Silverius</i>			
Edward, Translation of St.	..	..	..	June 20.
Edwold, St.	..	..	..	Oct. 13.
Egidius, St. or St. Giles	..	..	..	Nov. 28.
Egisippus, St.	..	..	..	Sept. 1.
Elfede and Ethelhild, St.	..	..	..	April 7.
Elfigus, St.	..	..	..	Dec. 17.
Elizabeth, St.	..	..	..	Dec. 1.
Elizabeth, St.	..	..	..	Nov. 19.
Ember-Days.	<i>Fide the Moveable Feasts.</i>			
Ember Weeks.	<i>Fide the Moveable Feasts.</i>			

Emerence, St.	..	..	..	..	Jan. 23.
Enurchus, St.	..	..	..	..	Sept. 7.
Epimachus	..	..	..	..	Dec. 12.
Epiphany, or Twelfth-Day	..	..	..	..	Jan. 6.
Eremund, St.	..	..	..	..	May 11.
Erenpere, or Exupera, St.	..	..	..	..	Sept. 28
Erkinwald, Translation of St.	..	..	..	..	Nov. 14.
Ethelburga, St.	..	..	..	..	Oct. 11.
Ethelbert. St. Bernardine	..	..	..	..	May 20.
Ethelreda, St.	..	..	..	..	June 23.
Ethelreda, Translation of St.—Florentius	..	..	..	..	Oct. 17.
Ethelgive, St.	..	..	..	..	Dec. 19.
Eucharist, or Easter-Day.	<i>Vide the Moveable Feasts.</i>				
Eugenius and Magnus, St.	..	..	..	..	Sept. 6.
Eulalie, St.	..	..	..	..	Feb. 12.
Euralia, St. Virgin, or Galalia	..	..	..	..	Dec. 10.
Eusebius, St.	..	..	..	..	Aug. 14.
Eustacius, St.	..	..	..	..	Mar. 29.
Eustathius and Faustus	..	..	..	..	Sept. 20.
Ewerildia, St.	..	..	..	..	July 9.
Ewals, Two	..	..	..	..	Oct. 3.
Exaltation of the Holy Cross	..	..	..	..	Sept. 14.
Exupera, St. or Erenpere	..	..	..	..	Sept. 28.
Fabian, St. and Sebastian	....	....	....	....	Jan. 20.
Faith, St.	....	....	....	....	Oct. 6.
Faustine, St. and Jovita.	....	....	....	....	Feb. 15.
Felix, St.	....	....	....	....	Jan. 14.
Felix, St.	....	....	....	....	Mar. 8.
Felix, St. Walstan, Confessor	.....	.....	.....	.....	May 30.
Felix, St.	....	....	....	....	July 29.
Felix, St. and Audactus	....	....	....	....	Aug. 30.
Fereol, St. and Victor	....	....	....	....	Sept. 18.
Firminus, St. Martyr and Cleophas	....	....	....	....	Sept. 25.
Flavian, St.	....	....	....	....	Feb. 17.
Florence, St.	....	....	....	....	Oct. 27.
Foce, St.	....	....	....	....	Mar. 5.
Francis, St. Confessor	.....	.....	.....	.....	Oct. 4.
Frideswide, St. Virgin	....	....	....	....	Oct. 19.
Fridoine, St.	.....	.....	.....	.....	Mar. 6.
Galalia, or Euralia, St. Virgin	....	....	....	....	Dec. 10.
Gallus Wolfr. St. Michael in the Mount	....	....	....	....	Oct. 18.
Gatian, St. Bishop	....	....	....	....	Dec. 18.
George, St. Martyr, or George of Cappadocia	....	....	....	....	April 23.
Germane, St. St. Caranus, Martyr	....	....	....	....	May 28.
Germane, St. Bishop	....	....	....	....	Oct. 30.
Germanus, St.	....	....	....	....	July 3.
Gervase and Protase, St.	....	....	....	....	June 19.
Gilbert, St.	....	....	....	....	Feb. 4.
Giles, St. or St. Egidius	....	....	....	....	Sept. 1.
Godric, St.	.....	.....	.....	.....	May 21.

Good-Friday. <i>Vide</i> the Moveable Feasts					
Gorgon, St.	....	.....	.....	.....	Sept. 9.
Gregory, St. Pope	.....	.....	.....	.....	Mar. 12.
Gregory, St. Nazian Bishop.	Translation	of St.	Nicolas		May 9.
Grimbald	....	....	....	....	July 8.
Gudwall, St.	....	....	....	....	June 6.
Guidon and Maurily, St.	....	....	....	....	Sept. 18.
Guthlake	....	....	....	....	April 11.
Hallows All, or All Saint's Day					Nov. 1.
Hierom, or Jerome, St.	.....	.....	.....	.....	Sept. 30.
Higinus, St.	....	....	....	....	Jan. 11.
Hilda, St.	....	....	....	....	Nov. 18.
Hilda, Translation of St.	.....	.....	.....	.....	Dec. 15.
Hillary, St. Bishop					Jan. 13.
Hipolite, St.					Aug. 13.
Holy Rood Day, or the Exaltation of the Holy Cross					Sept. 14.
Holy Virgin. <i>Vide</i> Lady.					
Hugh, St. Bishop.	.....	.....	.....	.....	Nov. 17.
Hyacinth and Protus, St.	....	....	....	....	Sept. 11.
Ignatius, Bishop and Martyr.	St. Bridget	....	....	....	Feb. 1.
Ignatius Loyala, St.		....	....	....	July 31.
Innocent's Day, or Feast of the Holy Innocents					Dec. 28.
Invention of the Holy Cross					May 3.
Invent. St. Stephen	.....	.....	.....	.....	Aug. 3.
Isidore, St.	....	....	....	....	April 4.
James, St. the less, and St. Philip, Apostles					May 1.
James, St. Apostle	.....	.....	.....	.....	July 25.
James, St. Translation of. St. David, King	.....	.....	.....	.....	Dec. 30.
Januarius, ht. Martyr	....	....	....	....	Sept. 19.
Jerome, or Hierom,	....	....	....	....	Sept. 30.
John, Chrys. Bishop	....	....	....	....	Jan. 27.
John, St. the Hermit	....	....	....	....	Mar. 27.
John, Climachus, St.	....	....	....	....	Mar. 30.
John, Port Latin, St.	St. John Damascen	....	....	....	May 6.
John, St. of Beverley	.....	.....	.....	.....	May 7.
John, St. Baptist's Nativity	....	....	....	....	June 24.
John, St. and St. Paul	....	....	....	....	June 26.
John, St. the Baptist, Octaves of	.....	.....	.....	.....	July 1.
John, St. the Baptist, Beheading of	....	....	....	....	Aug. 19.
John, St. the Evangelist	....	....	....	....	Dec. 17.
Joseph, St. Husband to Mary	.....	.....	.....	.....	Mar. 19.
Joseph of Arimathea	.....	.....	.....	.....	July 17.
Jude, St. and St. Simon, the Apostles	....	....	....	....	Oct. 18.
Julia, St. Virgin. Urbanus	....	....	....	....	May 11.
Julian, St. Martyr	....	....	....	....	Jan. 9.
Julian, St. Virgin	....	....	....	....	Feb. 16.
Julian, Ignatius, St.	....	....	....	....	Dec. 20.
Justine, St. and Ruffine	....	....	....	....	July 19.
Justine and Cyprian, St.	....	....	....	....	Sept. 26.



Justinus, St. Martyr. St. Zenoni	..	..	April 13.
Katherine, St. Virgin	..	..	Nov. 15.
Kenelme and Alexis, St.	..	..	July 17.
Lady, Annunciation of our. Lady Day	..	...	Mar. 25.
Lady, Assumption of our	..	..	Aug. 15.
Lady, Conception of our	..	...	Dec. 8.
Lady, Nativity of our	..	..	Sept. 8.
Lady, Octaves of our	..	..	Sept. 15.
Lady, Presentation of our	..	..	Nov. 21.
Lady, Purification of our	..	..	Feb. 2.
Lady, Visitation of our	..	..	July 2.
Lambart, St. Stephen and Socinus	..	..	Sept. 17.
Lammas Day. St. Peter ad vincula	..	..	Aug. 1.
Lanfranc, St. St. Anselme, Bishop	..	..	April 21.
Latin, John Port. St. St. John Damascen	..	...	May 6.
Laurence, St. Martyr	...	..	Aug. 10.
Leander, St.	..	..	Feb. 27.
Lebwin	..	...	Nov. 12.
Lent. <i>Vide the Moveable Feasts.</i>			
Leo, St. Bishop	..	..	June 28.
Leodegar, St. St. Thomas of Hereford	..	...	Oct. 2.
Leonard, St.	..	..	Nov. 6.
Leopoldus, St. and Machute	..	..	Nov. 15.
Leufred, St.	..	..	June 12.
Lewis, St. King	..	..	Aug. 25.
Low Sunday. <i>Vide the Moveable Feasts.</i>			
Lucia, St. Virgin	..	...	Dec. 13.
Lucian, St. Priest and Martyr	..	..	Jan. 8.
Lucius, St.	..	...	Dec. 3.
Luke, St. the Evangelist	..	..	Oct. 18.
Machute and Leopoldus, St.	..	..	Nov. 15.
Magnus and Eugenius, St.	..	..	Sept. 6.
Magory, St.	..	..	Oct. 24.
Marcel, St.	..	..	Jan. 16.
Marcella, St.	..	..	Jan. 31.
Marceline and Peter, St.	..	..	June 2.
Marceline, St.	..	..	June 18.
Marcus and Marcell, St. Sergus. Osithe	..	..	Oct. 7.
Margaret, St. Queen of Scots	..	...	June 10.
Margaret, St. Virgin	...	..	July 20.
Mark, St. the Evangelist	...	...	April 25.
Martin, St. Translation of. St. Odo	..	..	July 4.
Martin, St. Bishop	..	..	Nov. 10.
Martinianus, St.	..	..	Feb. 13.
Martinus, St.	..	..	March 3.
Martyn and Mennas. Martinmas Day	..	..	Nov. 11.
Martyred, Six Brethern	..	..	July 10.
Martyrs, Eleven Virgins. Ursula	..	..	Oct. 21.
Martyrs, Thirty	..	..	Dec. 22.
Martyrs, Hundred at Lichfield	..	..	Jan. 2.

Martyrs, Forty of Sebaste	..	..	..	Mar. 10.
Martyrs, Sixty Nine alii Ninety Seven	..	..	..	Feb. 21.
Mary. <i>Vide</i> Lady				
Mary Magdalen, St.	..	..	..	July 22.
Matthew, St. the Apostle	..	..	..	Sept. 21.
Mathias, St. the Apostle	..	..	..	Feb. 24.
Maud, St.	..	..	..	Mar. 14.
Maurice, St.	..	..	..	Sept. 22.
Maurily and Guidon	..	..	..	Sept. 13.
Maurus, St. St. Paul 1st, Hermit	..	..	..	Jan. 15.
Mawes, St.	..	..	..	Sept. 2.
Muxentia	..	..	..	April 16.
Mechtild	..	..	..	April 10.
Mellus, St. Bishop	..	..	..	April 24.
Michael, Apparation of St. the Archangel	..	..	..	May 8.
Michael, St. and All Angels. Michaelmas Day	..	..	..	Sept. 29.
Michael, St. in the Mount. Gallus Wolfr.	..	..	..	Oct. 16.
Midlent. <i>Vide</i> the Moveable Feasts.				
Midsummer Day. Nativity of St. John the Baptist	..	..	..	June 24.
Mildred, St.	..	..	..	Feb. 20.
Moses. St. Stephen, Martyr	..	..	..	Aug. 2.
Nabor and Felix, St.	..	..	..	July 12.
Name of Jesus	..	..	..	Aug. 7.
Narciasus, St. Bishop	..	..	..	Oct. 29.
Nativity of St. John, the Baptist. Midsummer Day	..	..	..	June 24.
Nativity of our Lady	..	..	..	Sept. 8.
Nativity of Jesus Christ. Christmas Day	..	..	..	Dec. 25.
Nicephorus	..	..	..	Mar. 13.
Nicetas, St.	..	..	..	April 2.
Nicolas, St. Bishop	..	..	..	Dec. 6.
Nicolas, Translation of St. St. Gregory, Nazian, Bishop	..	..	..	May 9.
Nicomede	..	..	..	June 1.
Octaves of St. Andrew. St. Ambrose, Bishop	..	..	..	Dec. 7.
Octaves of the Assumption of our Lady. St. Timothy	..	..	..	Aug. 22.
Octaves of St. John the Baptist	..	..	..	July 1.
Octaves of the Nativity of our Lady	..	..	..	Sept. 15.
Octaves of St. Laurence	..	..	..	Aug. 17.
Octaves of St. Peter	..	..	..	July 6.
Odo, St.	..	..	..	July 4.
Olyffe, St. Tiburtius	..	..	..	April 14.
Ortrude St.	..	..	..	June 27.
O Sapientia. St. Sezulf	..	..	..	Dec. 16.
Osithe. Sergus. St. Marcus and Marcell	..	..	..	Oct. 7.
Osmond, St. St. Barbary, Virgin	..	..	..	Dec. 4.
Osmund, St.	..	..	..	July 16.
Oswald, St.	..	..	..	Feb. 28.
Oswald, St. Archbishop	..	..	..	April 12.
Oswald, St.	..	..	..	Aug. 5.
Oswind, St.	..	..	..	April 18.
Pacian, St.	..	..	..	Mar. 9.

<b>Palm Sunday.</b> <i>Vide the Movable Feasts</i>			
<b>Panacrece, St. and Acheley.</b> Epiphanius Bishop	..	May 12.	
<b>Paschal Sabbath.</b> <i>Vide the Moveable Feasts.</i>			
<b>Passion of Seven Virgins</b>	..	April 9.	
<b>Passion Week.</b> <i>Vide the Moveable Feasts.</i>	..		
<b>Paternus, St.</b>	..	April 15.	
<b>Patrick, St. and Gertrude</b>	..	Mar. 17.	
<b>Paul, St.</b>	..	Jan. 10.	
<b>Paul, St. 1st, Hermit.</b> St. Maurus	..	Jan. 15.	
<b>Paul, Conversion of St.</b>	..	Jan. 25.	
<b>Paul, St. Bishop</b>	..	Feb. 8.	
<b>Paul and John, St.</b>	..	June 26.	
<b>Paulin, St. Archbishop of York</b>	..	Oct. 10.	
<b>Pelagia, St.</b>	..	Oct. 8.	
<b>Pentecost.</b> <i>Vide the Moveable Feasts.</i>			
<b>Perpetua, St.</b> St. Thomas Aquinas	..	Mar. 7.	
<b>Perpetuus, St.</b>	..	April 8.	
<b>Peter, St. in Cathedral, at Antioch</b>	..	Feb. 22.	
<b>Peter, St. Damian</b>	..	Feb. 23.	
<b>Peter, St. Mediolensis</b>	..	April 29.	
<b>Peter, St. and Marceline</b>	..	June 2.	
<b>Peter, St. and St. Paul, Apostles</b>	..	June 29.	
<b>Peter, St. Octaves of</b>	..	July 6.	
<b>Peter, St. ad vincula.</b> Lammas Day	..	Aug. 1.	
<b>Petronil, St.</b>	..	May 31.	
<b>Petrosius, St. Confessor</b>	..	June 4.	
<b>Philip, St.</b>	..	Aug. 23.	
<b>Pius.</b> Translation of St. Bennet	..	July 11.	
<b>Plough Monday.</b> St. Julian Martyr	..	Jan. 9.	
<b>Policarpe, St. Bishop</b>	..	Jan. 26.	
<b>Port Latin, St. John.</b> St. Damascen	..	May 6.	
<b>Praxedis, St. Virgin, and Arbogast</b>	..	July 21.	
<b>Presentation of our Lady</b>	..	Nov. 21.	
<b>Prisca, St.</b>	..	Jan. 18.	
<b>Private, St.</b> Bonaventura, Cardinal	..	July 13.	
<b>Protase, St. and Gervase</b>	..	June 19.	
<b>Protus, St. and Hyacinth</b>	..	Sept. 11.	
<b>Purification of our Lady.</b> Candlemas Day	..	Feb. 2.	
<b>Pulcheria, St.</b>	..	Sept. 10.	
<b>Quatuor Corona</b>	..	Nov. 8.	
<b>Quintin, St.</b>	..	Oct. 31.	
<b>Relict Sunday.</b> <i>Vide the Moveable Feasts.</i>			
<b>Remigius, St. Bishop</b>	..	Oct. 1.	
<b>Revell, St.</b> Bonaventura	..	July 14.	
<b>Richard, St. of Chichester</b>	..	April 3.	
<b>Richard, Translation of St.</b>	..	June 16.	
<b>Robert, St.</b>	..	May 24.	
<b>Robert, St.</b>	..	June 7.	
<b>Roch, St.</b>	..	Aug. 16.	
<b>Rogation Sunday.</b> <i>Vide the Moveable Feasts.</i>			

Romanus, St.	..	..	..	..	Feb. 29.
Roman, St. Martyr	..	...	..	..	Aug. 9.
Ruffine, St. and Justine	..	..	..	..	July 19.
Ruffus, St. Martyr	..	..	..	..	Aug. 27.
Saba, St. Sabine, or Abbot	..	...	..	..	Dec. 5.
Saints' Day All	..	..	...	..	Nov. 1.
Salome. St. Crispin and Crispiana	..	..	...	..	Oct. 25.
Sampson, St. Bishop	..	..	..	..	July 28.
Saturn, St.	..	..	...	..	Nov. 29.
Scholastica, St. St. William, Confessor	..	..	..	..	Feb. 10.
Sebastian, and Fabian, St.	..	..	..	..	Jan. 20.
Seni and Abdon, St.	..	..	..	..	July 30.
Serapia, St.	..	..	..	..	Sept. 3.
Sergus. St. Marcus and Marcell. Osihe	..	..	..	..	Oct. 7.
Servatius, St.	...	..	..	..	May 13.
Severine, St. Martyr	..	..	..	..	Aug. 26.
Severinus	..	..	..	..	Feb. 11.
Sewal, St. Archbishop of York	..	..	..	..	May 18.
Sexulf, St.	..	..	..	..	Dec. 16.
Shrove Sunday. <i>Vide the Moveable Feasts.</i>					
Shrove Tuesday. <i>Vide the Moveable Feasts.</i>					
Silverius. Translation of St. Edward the Confessor	..	..	..	..	June 20.
Silvester, St. Bishop	..	..	..	..	Dec. 31.
Simeon Stylites, St...	..	..	..	..	Jan. 5.
Simeon, St.	..	..	..	..	Feb. 18.
Simon, St. and St. Jude, the Apostles..	..	..	..	..	Oct. 28.
Sixtus, St. 3	..	..	..	..	Mar. 28.
Sixtus, St. Bishop	..	..	..	..	April 6.
Sophronius, St.	..	..	..	..	Mar. 11.
Soter, St.	..	..	..	..	April 22.
Souls' Day All	..	..	..	..	Nov. 2.
Stephen, St. the Protho-Martyr	..	..	..	..	Dec. 26.
Stephen, St. Martyr. Moses	..	..	..	..	Aug. 2.
Stephen and Socinus. St. Lambart	..	..	..	..	Sept. 17.
Swithin, Translation of St.	..	..	..	..	July 15.
Tarasius, St.	..	..	..	..	Feb. 25.
Tecla, St.	..	..	..	..	Oct. 15.
Theodoric, St.	..	..	..	..	Jan. 3.
Theodore, St. Martyr	..	..	..	..	Nov. 9.
Thomas St. Aquinas. St. Perpetua	..	..	..	..	Mar. 7.
Thomas, St. of Hereford	..	..	..	..	Oct. 2.
Thomas, St. of Canterbury	..	..	..	..	Dec. 29.
Thorns, Crown of, Feast of the	..	..	..	..	May 4.
Timothy, St. St. Babylas, Bishop	..	..	..	..	Jan. 24.
Timothy, St.	..	..	..	..	Aug. 22.
Titus, St. ...	..	..	..	..	Jan. 4.
Transfiguration of Christ	..	..	..	..	Aug. 6.
Translation of St. Barnard and Adalgune	..	..	..	..	May 16.
Translation of St. Bennet	..	..	..	..	July 11.
Translation of St. Cuthbert and St. Theodosia	..	..	..	..	Sept. 4.

Translation of St. Edmund	..	..	..	June 9.
Translation of St. Edward, the Confessor	..	..	..	June 20.
Translation of St. Edward	..	..	..	Oct. 13.
Translation of St. Erkinwald	..	..	..	Nov. 14.
Translation of St. Etheld	..	..	..	Oct. 17.
Translation of St. Hilda	..	..	..	Dec. 15.
Translation of St. James	..	..	..	Dec. 30.
Translation, St. Nicolas	..	..	..	May 9.
Translation of St. Richard	..	..	..	June 16.
Translation of St. Swithin	..	..	..	July 15.
Translation of St. Thomas à Becket	..	..	..	July 7.
Twelfth Day, or Epiphany	..	..	..	Jan. 6.
Tyburtius, St. Martyr	..	..	..	Aug. 11.
Valentine, St.	..	..	..	Feb. 14.
Vedastus. Amandus. Dorothy	..	..	..	Feb. 6.
Victor, St. and Fereol	..	..	..	Sept. 18.
Victoria, St. Virgin..	..	..	..	Dec. 23.
Victorian, St.	..	..	..	Mar. 23.
Vigilius, St. Bishop. St. Anne	..	..	..	July 26.
Vincent, St.	..	..	..	Jan. 22.
Vincent, St.	..	..	..	April 5.
Visitation of our Lady	..	..	..	July 2.
Vitalis, St. Martyr	..	..	..	April 28.
Ursula. Eleven Martyrs Virgins	..	..	..	Oct. 21.
Whitsuntide. <i>Vide the Moveable Feasts.</i>				
Wilfrid, St.	..	..	..	Oct. 12.
Wilfrid, St. junr. Archbishop	..	..	..	Oct. 5.
Willebrod, St. Archbishop. Florentius	..	..	..	Nov. 7.
William, St. of Norwich	..	..	..	Mar. 24.
William, St. Confessor	..	..	..	June 8.
Winifred, St. Virgin	..	..	..	Nov. 3.
Wolstan, St.	..	..	..	Jan. 19.
Wulfhide, St.	..	..	..	Dec. 9.
Zacharias, St. Bertine. Martini	..	..	..	Sept. 5.
Zachary, St.	..	..	..	Mar. 15.
Zenoni, St. St. Justinus, Martyr	..	..	..	April 13.

### COMPARISON OF CHRISTIAN AND CHINESE YEARS.

The Chinese cycle of 60 years began 2,637 years before Christ and is still in use the year A. D. 1861, being the 4,498th year in the era, and the cycle being the 75th since it was established. The Chinese however in ordinary cases date events according to the year of the reigning Emperor. The following table will shew the corresponding years of the Christian era, the Chinese cycle of 60 years, the year of the reigning Emperor and the Chinese New Years day from the year 1790, which will be sufficient for all purposes in the Straits, commencing as

it does immediately after the formation of the Settlement at Pinang.

Year.	Cycle.	Reign.	Com- men- ced.	Year.	Cycle.	Reign.	Com- men- ced.	Year.	Cycle.	Reign.	Com- men- ced.
1790	47	54 <sup>Jan</sup>	15th Feb.	1814	11	18	21st Feb.	1838	35	18	26th Jan. <sup>3</sup>
1791	48	55	4th Feb.	1815	12	19	10th Feb.	1839	36	19	14th Feb.
1792	49	56	24th Jan. <sup>4</sup>	1816	13	20	30th Jan. <sup>6</sup>	1840	37	20	3d Feb. <sup>4</sup>
1793	50	57	11th Feb.	1817	14	21	17th Feb.	1841	38	21	20th Feb.
1794	51	58	31st Jan. <sup>3</sup>	1818	15	22	6th Feb.	1842	39	22	10th Feb.
1795	52	59	21st Jan.	1819	16	23	27th Jan. <sup>3</sup>	1843	40	23	30th Jan. <sup>6</sup>
1796	53	60	9th Feb.	1820	17	24	13th Feb.	1844	41	24	18th Feb.
1797	54	1	28th Jan. <sup>6</sup>	1821	18	1 <sup>Jan</sup>	2d Feb.	1845	42	25	7th Feb.
1798	55	2 <sup>Jan</sup>	16th Feb.	1822	19	2	23d Jan. <sup>4</sup>	1846	43	26	27th Jan. <sup>6</sup>
1799	56	3	5th Feb.	1823	20	3	10th Feb.	1847	44	27	14th Feb.
1800	57	4	25th Jan. <sup>4</sup>	1824	21	4	31st Jan. <sup>6</sup>	1848	45	28	5th Feb.
1801	58	5	13th Feb.	1825	22	5	17th Feb.	1849	46	29	24th Jan. <sup>5</sup>
1802	59	6	3d Feb.	1826	23	6	7th Feb.	1850	47	30	12th Feb.
1803	60	7	23d Jan. <sup>3</sup>	1827	24	7	27th Jan. <sup>6</sup>	1851	48	1	1st Feb. <sup>6</sup>
1804	1	8	11th Feb.	1828	25	8	15th Feb.	1852	49	2	20th Feb.
1805	2	9	31st Jan. <sup>6</sup>	1829	26	9	4th Feb.	1853	50	3	8th Feb.
1806	3	10	19th Feb.	1830	27	10	24th Jan. <sup>7</sup>	1854	51	4	29th Jan. <sup>7</sup>
1807	4	11	8th Feb.	1831	28	11	11th Feb.	1855	52	5	17th Feb.
1808	5	12	29th Jan. <sup>5</sup>	1832	29	12	1st Feb. <sup>6</sup>	1856	53	6	6th Feb.
1809	6	13	16th Feb.	1833	30	13	20th Feb.	1857	54	7	26th Jan. <sup>4</sup>
1810	7	14	6th Feb. <sup>3</sup>	1834	31	14	8th Feb.	1858	55	8	15th Feb.
1811	8	15	27th Jan.	1835	32	15	29th Jan. <sup>6</sup>	1859	56	9	4th Feb.
1812	9	16	15th Feb.	1836	33	16	17th Feb.	1860	57	10	25th Jan. <sup>3</sup>
1813	10	17	3d Feb. <sup>5</sup>	1837	34	17	5th Feb.	1861	58	11	13th Feb.

Note to Table. The small figures after the months, shew the number of the month, which is intercalated, in order to make the lunar year correspond with the solar year. In the year so fixed there are two months or moons of the same name. Thus in 1800 there were two moons each named the 3rd moon.

**To find the number of Days from one Month to the same day in another.**

Between	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
January,...	365	334	306	275	245	214	184	153	122	92	61	31
February, ..	31	365	337	306	276	245	215	184	153	123	92	62
March, ...	59	28	365	334	304	273	243	212	181	151	120	90
April, ....	90	59	31	365	335	304	274	243	212	182	151	121
May, .....	120	89	61	30	365	334	304	273	242	212	181	151
June, .....	151	120	92	61	31	365	335	304	273	243	212	182
July, .....	181	150	122	91	61	30	365	334	303	273	242	212
August, ...	212	181	153	122	92	61	31	365	334	304	273	243
September, ..	243	212	184	153	123	92	62	31	365	335	304	274
October, ...	273	242	214	183	153	122	92	61	30	365	334	304
November, ..	304	273	245	214	184	153	123	92	61	31	365	335
December, ...	334	303	275	244	214	183	153	122	91	61	30	365

In using Table 2, bear in mind that the month *from* is in the top row, and the month *to* in the left hand column. It must be observed, that in Leap Year, if the end of the month of February be included in the time, one day must be added. If it be desired to find the number of days from a given day in one month to a different day in another, the difference between the dates must be added to, or subtracted from (as the case may be), the amount. For example:—To find the number of days between the 5th of Jan. and 12th of Nov.; to 304 (the number in the table between those two dates) add 7 days, or the time between the 5th and 12th, and it gives 311, and 312 if in leap year.

**To find the number of Days from Jan. 1st  
to Dec. 31st.**

Days.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1	1	32	60	91	121	152	182	213	244	274	305	335
2	2	33	61	92	122	153	183	214	245	275	306	336
3	3	34	62	93	123	154	184	215	246	276	307	337
4	4	35	63	94	124	155	185	216	247	277	308	338
5	5	36	64	95	125	156	186	217	248	278	309	339
6	6	37	65	96	129	157	187	218	249	279	310	340
7	7	38	66	97	127	158	188	219	250	280	311	341
8	8	39	67	98	128	159	189	220	251	281	312	342
9	9	40	68	99	129	160	190	221	252	282	313	343
10	10	41	69	100	130	161	191	222	254	283	314	344
11	11	42	70	101	131	162	192	223	254	284	315	345
12	12	43	71	102	132	163	193	224	255	285	316	346
13	13	44	72	103	133	164	194	225	256	289	317	347
14	14	45	73	104	134	165	195	226	257	287	318	348
15	15	46	74	105	135	166	196	227	258	288	319	349
16	16	47	75	106	136	167	197	228	259	289	320	350
17	17	48	76	107	137	168	198	229	260	290	321	351
18	18	49	77	108	138	169	199	230	261	291	322	352
19	19	50	78	109	139	170	200	231	262	292	323	353
20	20	51	79	110	140	171	201	232	263	293	324	354
21	21	52	80	111	141	172	202	233	264	294	325	355
22	22	53	81	112	142	173	203	234	265	295	326	356
23	23	54	82	113	143	174	204	235	266	296	327	357
24	24	55	83	114	144	175	205	236	267	297	328	358
25	25	56	84	115	145	176	206	237	268	298	329	359
26	26	57	85	116	146	177	207	238	269	299	330	360
27	27	58	86	117	147	178	208	239	270	300	331	361
28	28	59	87	118	148	179	209	240	271	301	332	362
29	29		88	119	149	180	210	241	272	302	333	363
30	30		89	120	150	181	211	242	273	303	334	364
31	31		90		151		212	243		304		365

*In Leap Years one day must be added after the 28th of February.*

### THE USES OF THE FOREGOING TABLE.

I. To find the number of days from the end of the year to any day in any month of the year following.—*Rule.* Opposite the given day in the margin, look under the given month, which will show the number of days required.

II. To find the number of days from any particular day to the end of the year; suppose 27th July. From 365 (the days in a year) take the number answering to 27th July, *viz.* 208; the remainder is 157 days.

III. To find the number of days from any day in one month to any day in another month; suppose from 5th April to 28th November.—*Rule.* Take the difference between the numbers corresponding to those days: *e. g.* between Nov. 28th, the 322d day of the year, and April 5th, the 95th, are 227 days.

IV. To find the number of days between any day in one year to any day in the year following; suppose from 21st August, 1842, to 27th May, 1843. From 365 days in a year, take the number of 21st August, 233 days, which leaves 132 days in 1842; add the number up to 27th May, 147 days, together make the total 279 days required.

### For converting Chinese money weight into English troy weight.

<i>Tael.</i>	<i>Oz. dwts. grs. dec.</i>	<i>Tael.</i>	<i>Oz. dwts. grs. dec.</i>	<i>Can- dar.</i>	<i>Dwts. grs. dec.</i>
100	120 16 0	9	10 17 10.56	9	2 4.1856
50	60 8 0	8	9 13 6.72	8	1 22.3872
25	30 4 0	7	8 9 2.88	7	1 16.5888
24	28 19 20.16	6	7 4 23.04	6	1 10.7904
23	27 15 16.32	5	6 0 19.20	5	1 4.9920
22	26 11 12.48	4	4 16 15.36	4	0 23.1936
21	25 7 8.64	3	3 12 11.52	3	0 17.3952
20	24 3 4.80	2	2 8 7.68	2	0 11.5968
19	22 19 0.96	1	1 4 3.84	1	0 5.7984
18	21 14 21.12	<i>Mace</i> 9	1 1 17.856	<i>Cash</i> 9	0 5.21856
17	20 10 17.28	8	0 19 7.872	8	0 4.63872
16	19 6 13.44	7	0 16 21.888	7	0 4.05888
15	18 2 9.60	6	0 14 11.904	6	0 3.47904
14	16 18 5.76	5	0 12 1.920	5	0 2.89920
13	15 14 1.92	4	0 9 15.936	4	0 2.31936
12	14 9 22.08	3	0 7 5.952	3	0 1.73952
11	13 5 18.24	2	0 4 19.968	2	0 1.15968
10	12 1 14.40	* 1	0 2 9.984	1	0 0.57984

\* or 10 Candareens.



### **Formulae for reducing Chinese, English and Indian weights.**

One pound troy is equal to taels  $9\frac{233}{1000}$  nearly.

One pound avoirdupois is equal to three fourths of a catty, or  $1\frac{1}{2}$  tls.

One hundred weight is equal to 84 catties.

Ninety catties seda at Macao is equal to one picul balanca.

One ton is equal to 16 piculs 80 catties.

One ton is equal to 27.222 Indian maunds, or nearly  $27\frac{1}{2}$  maunds.

One Indian maund is  $82\frac{1}{2}$  lbs. avoirdupois exactly.

One maund or 100 lbs. troy is equal to 993.446 taels.

One tola is equal to 3.221 taels.

One Bengal factory maund is equal to 50 catties.

One Bengal bazar maund is equal to 61.6 catties.

*To convert taels into pounds troy.*—Divide by ten, and to the quotient add two thirds of one per cent.

*To convert piculs into pounds avoirdupois.*—Add a third to the number of catties.

*To convert pounds avoirdupois into catties and piculs.*—Subtract a quarter, for catties; and divide the remainder by 100, for piculs.

*To convert hundred weights into piculs.*—Multiply by 84, and divide by 100.

*To convert Bengal factory maunds into piculs.*—Multiply by 56, and divide by 100.

*To convert piculs into hundred weights.*—Multiply by 100, and divide by 84; Or, if minute exactness is not required, add one fifth, and from the result deduct 8 per mil.

*To convert piculs into Bengal factory maunds.*—Multiply by 100, and divide by 56; Or, if minute accuracy is not required, add three-quarters, and two per cent. upon the result.

*To convert Bengal bazar maunds into piculs.*—Multiply by 616, and divide by 1000.

*To convert piculs into Bengal bazar maunds.*—Multiply by 1000 and divide by 616; Or, if minute accuracy is not required, add  $62\frac{1}{2}$  per cent.

*To convert Indian weights into avoirdupois weight.* Multiply the weight in seers by 72, and divide by 35: the result will be the weight in pounds avoirdupois. Or, multiply the weight in maunds by 36, and divide by 49; the result will be the weight in pounds avoirdupois.

*To convert avoirdupois weight into Indian weights.* Multiply the weight in pounds avoirdupois by 35, and divide by 72; the result will be the weight in seers. Or 2, multiply the weight in cwts. by 49, and divide by 36; the result will be the weight in maunds.

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*Commercial weights of India, and of other trading places in Asia, compared with the British Indian Unit of weight, and with the Avoirdupois system of England.*

Place.	Denomination of Weights.	Value in English avoirdupois weight.		
		lb.	oz.	dr.
Bairseah, Malwa.	<i>Seer</i> , of 80 Bhopal rupees,.....	1	14	13
	<i>Maund</i> , of 40 seers,.....	77	1	12
Bangalore, in Mysore.	<i>Kucha seer</i> , of 24 rupees, .....	0	10	0
	<i>Do. maund</i> , of 40 seers, .....	25	0	0
	<i>Candy</i> , of 20 maunds, .....	500	0	0
	<i>Pucka seer</i> , for grain, 84 rupees, ..	2	1	10½
	<i>Candy</i> , of 20 colagaa, or 160 seers, ..	336	12	4½
	<i>Mercal</i> , of 9, 10 12, &c. to 96 seers, ..			
Banjarmassin, in Borneo I.	<i>Tale</i> , of 16 mace, .....		grs.	614,4
	<i>Picul</i> and catty, (see China,) ....			
Bantam, Java.	<i>Tale</i> , for gold, musk, &c. ....		grs.	105,5
	<i>Bakar</i> =3 piculs, of 100 catties,....	336	0	0
	<i>Coyan</i> , of rice=200 gantama, ....	8681	0	0
Batavia, Java.	<i>Mark</i> , of 9 reals,.....		grs.	422
	<i>Bakar</i> =3 piculs, of 100 catties,....	406	14	0
	<i>Coyan</i> , of rice=3,300 lbs. Dutch ..	3581	0	0
	<i>Timbang</i> , 5 piculs, .....	678	2	0
	<i>Kanne</i> , liquid measure, .....			91 cub. in.
Bauleah, Bengal.	<i>Seer</i> , of 80 sa. wt. or tolas .....	..	..	..
	<i>Seer</i> , of 60 sa. wt. for liquids, &c... ..	..	..	..
Benares.	<i>Tola</i> , of 215 grains troy.....	..	..	..
	<i>Seer</i> , of 105 sa. wt., .....	2	10	0
	<i>Seer</i> , of 103 sa. wt., .....	2	9	2
	<i>Seer</i> , of 96 sa. wt., .....	2	6	7
Bombay,	<i>Tank</i> , of 24 ruttees, (for pearls,) ..		72	grains.
Money weight.	<i>Tola</i> , (formerly 179 grs.) .....		180	grs.
Commercial weight.	<i>See</i> , of 30 pice or 72 tanks, .....	0	11	3½
	<i>Maund</i> , of 40 seers, .....	28	0	0
	<i>Candy</i> , of 20 maunds, .....	560	0	0
	<i>Seer</i> , of 2 tipprees, .....	0	11	3.2
Grain measure.	<i>Parah</i> , of 16 paily or adholy, .....	44	12	12.8
	<i>Candy</i> , of 8 paraha,.....	358	6	4
	<i>Parah</i> , salt measure, 6 gallons,....		1607.6	c. i.
	<i>Seer</i> , for liquids, 60 Bom. rs., .....	1	1	8½
Bushire, Persia.	<i>Man</i> , Tabrezy,=730 miscal, .....	7	10	15
Canton.	See China			
Cape Town.	91½ Dutch=100 English weight. ..			
China.	<i>Tale</i> , (see p. 14=579.84 grs.) ....	0	1	5½
	<i>Catty</i> , of 16 tale,.....	1	5	5½
	<i>Picul</i> , of 100 catties .....	133	5	5½
Colombo, Ceylon.	<i>Candy</i> , or <i>Bakar</i> , .....	500	0	0
	<i>Garce</i> , (82 cwt. 2 qrs. 16½ lbs.) .....	9256	8	0

	<i>Mercal</i> , dry measure=10 seers,....	2.88	gallons
	<i>Parah</i> , do. ....	5.75	ditto.
Goa, Malabar.	<i>Quintal</i> , of 4 arobas, .....	129	5 5
	<i>Candy</i> , of 20 maunds, .....	495	0 0
Lucknow, Oude.	<i>Seer</i> , of 100 Lucknow rs. ....	2	7 6½
Madras	<i>Pagoda</i> weight=52.56 grs. ....		
	<i>Maund</i> , of 40 seers, or 8 vis. ....	25	0 0
	<i>Candy</i> , of 20 mds. ....	500	0 0
	<i>Garce</i> , for grain=12.8 mds. ....	320	0 0
	<i>Puddy</i> , oil measure=8 olluka, or ..	9375	cub. in.
	<i>Parah</i> , for chunam=5 mercals....	3750	cub. in.
	<i>Mangelin</i> , for pearls=6 grains ....		
	18 Mad. chows=55 Bom. chows ..		
Manilla, Phil. Is.	Spanish weights and Chin. picul ..		
Mauritius.	<i>Ton</i> , of sugar=2000 French, &c. ..	2160	lbs.
	<i>Do.</i> of grain and coffee=1400 do. ....	1512	0 0
	<i>Do.</i> of cloves=1000 do. ....	1080	0 0
	<i>Do.</i> of cotton=750 do. ....	810	0 0
Mocha, Arab.	<i>Maund</i> , of 40 vakias .....	3	5 0
	<i>Bahar</i> =15 frazils of maunds ....	450	0 0
	<i>Teman</i> , measure of rice .....	168	0 0
	<i>Gudda</i> , liquid measure=2 gallons ..	18	0 0
Pegu, Birma.	<i>Tical</i> , 100 to the vis. ....	237½	grains
	<i>Candy</i> , 150 vis., reckoned at .....	500	0 0
	<i>Basket</i> , rice measure, 16 vis. ....	58	0 0
Persia.	<i>Man</i> of Shiraz=600 miscals .....	12	10 14.4
	<i>Man</i> of Tabréz, 300 do. 150 dirhems ..	6	5 7.2
	<i>Artaba</i> , corn measure, 2 bushels. ....		
Pondicherry,	<i>Seer</i> , of 24½ Pon. rs.=731½ fan. ..	0	9 11½
Car. C.	<i>Maund</i> , of 8 vis. ....	25	14 5½
	<i>Garce</i> , of grain,=100 mercals, ....	13½	quarters.
Rangoon.	<i>Vis</i> , of 100 tikals, .....	3	55½ 140
	<i>Candy</i> , of 150 vis., reckoned, .....	550	0 0
	<i>Ten</i> , or basket, of rice,=16 vis.,....	58	4 0
Singapore, Malay.	<i>Bumal</i> , for gold .....	832	grs.
	<i>Picul</i> , of 100 catties, (see China.) ..		
Suez, Red Sea.	<i>Rottolo</i> , of 144 drams, .....	1	4 0
	<i>Quintal</i> , varies from 110 to 150 rot.		

### FOOT MEASURES

OF VARIOUS COUNTRIES REDUCED TO ENGLISH FEET.

	<i>Eng. Feet.</i>		<i>Eng. Feet.</i>
Amsterdam, .....	,930	Venice, .....	1,137
Antwerp, .....	,940	Verona, .....	1,117
Augsburg, .....	,972	Vicenza, .....	1,156
Barcelona, .....	,992	Vienna, .....	1,036
Bâle, ..	,944	Ulm, .....	,826
Berlin, .....	,992	Urbino, .....	1,162
Berne, .....	,962	Utrecht, .....	,741

	<i>Eng. Feet.</i>		<i>Eng. Feet.</i>
Bologna, .....	1,244	Warsaw, .....	1,169
Bremen, .....	,955	Werel, .....	,772
Breslau, .....	1,125	Zurich, .....	,979
Brussels, .....	,902	<b>OTHER MEASURES.</b>	
China, mathem., .....	1,127	<b>REDUCED TO ENGLISH FEET.</b>	
China, imperial, .....	1,051	Amsterdam ell, .....	2,223
Constantinople, .....	2,195	English fathom, .....	6,
Copenhagen, .....	1,045	French metre, .....	3,198
Cracow, .....	1,169	French toise, .....	6,396
Dantzic, .....	,923	Venice ell, .....	2,069
Dresden, .....	,929	Vienna ell, .....	2,557
Florence, .....	,994	<b>ANCIENT MEASURES.</b>	
Frankfort, .....	,933	Arabian foot, .....	1,095
Hamburg, .....	,933	Babylonian foot, .....	1,144
Leghorn, .....	,992	Egyptian foot, .....	1,421
Leipsic, .....	11,034	Greek foot, .....	1,007
Leyden, .....	1,023	Hebrew foot, .....	1,212
Liege, .....	,944	Hebrew sacred cubit, .....	2,002
Lisbon, .....	,952	Hebrew great cubit, .....	12,012
Lyons, .....	1,119	Roman foot, .....	,965 to, 970
Madrid, .....	,915	Egyptian Stadium, .....	730, 8
Marseilles, .....	,814	Roman mile of Pliny, .....	4840, 5
Mentz, .....	,988	Roman mile of Strabo, .....	4905,
Moscow, .....	,928	Pythian or Delphic stadium, .....	576, 877
Munich, .....	,947	The mean, or nautical, or Per-	
Nuremberg, .....	,996	sian stadium .....	552, 147
Padua, .....	1,406	Great Alexandrian, or Egyp-	
Palermo, .....	,747	tian stadium, .....	710, 659
Paris, .....	1,066	<b>JEWISH ITINERARY MEASURES.</b>	
Rhinland, .....	1,023	<i>Eng. Miles. Paces Feet.</i>	
Prague, .....	,987	Cubit, .....	0 0 1,824
Rome, .....	,966	Stadium, .....	0 145 4,6
Stockholm, .....	1,073	Sabbath day's journey, .....	0 729 3,0
Strasburg, .....	,956	Eastern mile, .....	1 403 1,0
Trent, .....	1,201	Parasang .....	4 153 3,0
Turin, .....	1,676	A day's journey, .....	33 173 4,0
Tyrol, .....	1,096		

### *Mahamedan Calendar.*

The primitive mode of computing time in use among the Arabs was adopted by Mahomet as an element of his religious system, and combined with the new era, the flight from Mecca to Medina, it has become the common chronological standard of all the Mahomedan nations. This Calendar is based on Lunar observations and is somewhat vague and uncertain in its mechanism.

The civil day commences at the moment of sunset, and sunrise divides

the day into two periods of variable duration according to the latitude of the particular place : thus in northern latitudes at one season of the year the day would be very short and the night long while in the other season the opposite would result, and wherever situated they divide the day and night each into 12 equal parts or hours. The Christian and Mahomedan civil day consequently coincide only in part, the epoch of the latter preceding that of the former by half the variable duration of the Mahomedan night or 6 variable hours. Hence, as the Christian civil day commences at midnight, the first 18 hours concur with the last 18 mean hours of the corresponding Mahomedan day, while the last 6 hours of the same Christian day coincide with the first 6 mean hours of the succeeding Mahomedan day : an explanation which accounts for their mode of reckoning, the hours from 6 p. m. till midnight on any day, for instance a Malay will say an event took place at 8 o'clock on Malam Ahad Sunday night, which by our reckoning corresponds to 8 p. m. on Saturday night.

The Mahomedan week comprises a period of 7 days, which are named

Yaum-al-ahad	first day	Sunday
" " isnin or senian	2nd "	Monday
" " salassa	3rd "	Tuesday
" " arbau or rabu	4th "	Wednesday
" " khamis	5th "	Thursday
" " djuma or jumaat, meeting day,		Friday
" " sab or Sabtu, Sabbath	Days a	
day of rest	.....	Saturday

The commencement of the Mahomedan month is determined by actual observation ; the epoch of the first day of each month coinciding with the epoch of that civil day which immediately follows upon the first visible appearance of the new moon in the evening horizon, or the moon's first visible phase hâlal, as seen from the plain ; but in order to provide against the confusion which would arise from such a mode of reckoning, it is provided by the Sunnas or Traditions that, whenever a clouded state of the atmosphere prevents the new moon from being seen on the thirtieth day before sunset, the new moon is to be dated from that sunset. The Mahomedan moon or month therefore fluctuates between 29 and 30 days and in an order of succession neither regular nor subject to controul.

The number of months is 12, named,

Mohurrum	Rejab
Safar	Shaban
Rabi-al-Awal	Ramazan
Rabi-al-Akhir	Shawal
Jumadial-Awal	Dulkhaida
Jumadial-Akir	Dulhajee

A cycle of 12 months, beginning with the 1st of Mohurrum, is termed a year Sonat. It is of a purely lunar character and contains 354 or 355 days, according to the moon's anomaly or the state of the weather. It falls short of our Solar year by 10, 11, or 12 days as the case may be ; and, in the course of about 33 Solar years, performs the complete round of the seasons, so that their new year, or any fixed festival, may be in any of the 12 months, sometimes in mid-winter and sometimes in mid-summer.

The common era, the Hejirah or flight, is fixed by their astronomers on Thursday, at sun set, the 15th July 622, or by our computation as above explained Wednesday at 6 p. m. the 14th July, old style. Their historical writers however place it a day later, but all agree in making the day a Thursday.

In order to obviate the difficulties and confusion of the system the Arab astronomers have given a cyclical form, deduced from theoretical astronomy, to the assumed results of actual observation. This cycle, which comprises a period of 30 lunar years, is thus constituted;—a duration of 30 or 29 days alternately is, in the first instance, assigned to the 12 months of the year, which would accordingly contain 354 days, but the corresponding mean astronomical period contains 354 days 8 hours 48 minutes 36 seconds. Neglecting the seconds, which would only accumulate to one day in 2,400 years, the difference of 8 hours 48 minutes amounts, at the conclusion of 30 such periods, to 11 days, the two cycles comprising respectively 10,620 and 10,631 days. In order to adjust this difference and to keep the cyclical in accordance with the natural calendar, 11 days are intercalated, in the former, in the course of every 30 lunar years. This is done when ever the excess of the astronomical cycle over and above the last day intercalated, has accumulated to 12 full hours; that is. in the 2nd, 5th, 7th, 10th, 13th, 16th, 18th, 21st, 24th, 26th and 29th year of each cycle. Such years are made leap years, by the addition of a day to the last month Dulhajee, which, in common years, has only 29, but in these leap years has 30 days.

The Turks use a different cycle of 8 years instead of 30 years, and frequently a difference of a day occurs, but their great festivals are determined in the orthodox manner, namely by actual observation of the moon. But, from the variety of calendars used, it may happen that the same event may be ascribed to one, two or even three different days of the month, though corresponding exactly in the day of the week, hence the importance of the practice adhered to by all Mahomedan writers of naming the day of the week as well as the day of the month.

It is to be observed further that the Indian Mahomedan Calendar does not agree with that in use among the Arabs and other Western Mahomedans. There is always a day, or sometimes more, of difference. Thus, in 1845 the Arab New Year commenced on Thursday the 9th of January, while by the Indian Calendar it commenced on Friday the 10th January.

#### *Mahomedan Division of the Days.*

The division of the day among Mahometans is chiefly subservient to the stated times of performing their devotions, and is not generally very accurate. They begin their account at sunset, reckoning twelve hours from thence to sunrise, whether the night belong or short; from sunrise to sunset they also reckon twelve hours, and consequently a night hour is longer in the winter than an hour of the day, and in summer the hours of the day are longer than those of the night. At the equinoxes alone, all the hours are of equal length, and then they coincide with those adopted by us, in commencement and duration: differing, of course, 6 hours in enumeration, so that our six o'clock is their twelve, our seven is their one, &c. At other periods of the year, also, their six o'clock coincides with our twelve, but every other hour differs more or less from

ours. The time of sunrise, and, consequently, the length of the day, being known, the length of each hour will be easily found by division, and the period of any given hour determined. Thus, if the sun rise at 7 o'clock, the length of the day will be ten hours (of 60 minutes each) and that of each hour 50 minutes. One o'clock, Mahomedan reckoning, will be at 50 minutes after 7, two o'clock 40 minutes after eight and three o'clock will then be half past nine, and so on of the others. When the sun rises at five o'clock, the three first hours of the day will be completed severally at 10 minutes after six, twenty minutes after seven, and half past eight. In every case six o'clock arrives exactly at midday.

### *Mahomedan Festivals.*

During the *Ramazan* or fasting month every good Mahomedan is expected to abstain from all food, drink, narcotic &c. from the break of each day till the stars are visible at night; not even a drop of water is to be taken nor a mouthful of betelnut. The appearance of the new moon at the beginning of the month of Shawal is consequently looked for with anxiety, and when it does appear high festival is held. The festival day *Hari Rayah* will be due this year on the 13th April.

*Buhr-reed* occurs 9 days after the new moon in Dulhajee is seen, this is the commemoration of Abraham offering up Isaac, or as the Mahomedans say Ishmael, as a sacrifice. Offerings of camels, sheep, goats, kids or lambs are made on these occasion, and it is supposed that the animals now sacrificed will be allowed to assist the believer in his difficult passage over the scythe bridge into Paradise.

*Mohurrun.* The mourning festival, held in remembrance of Hassein and Hossein the first martyrs. Hassein was poisoned by an emissary of the usurping Caliph, and Hossein was cast from a precipice on the plain of Kurbulla on the 10th of Mohurrun. Hassein and Hossein were sons of Fatima, the Prophet's daughter by her cousin Ali. The two sects Sheahs and Soonies take different sides in this matter: the former take Ali and his descendents as the true successors of the Prophet, and the latter acknowledge the Caliphs, Aboobuker, Omar and their successors as the lawful leaders. This division continues till the present day and gives rise to the quarrels always found at this season. The festival commences on the first day of the moon. Tazias or representations of the tomb of Hossein, in every kind of material, according to the means of the parties, from gold and silver to bamboo and paper, are carried in procession through the streets; mourning assemblies are held, morning and evening, at the Mosques, and descriptions of the sufferings of the martyrs are read by the priests: the procession of Dhul Dhul, Hossein's horse, is also conducted with great ceremony. The Tazias are conveyed to the burial grounds at the end of the festival, and deposited there with funeral rites. The Taboots are representations of the tomb of Hassein (as the Tazias are of Hossein's tomb). These representations are not approved by the Persians or Arabians, and many Mahomedans regard them with strong disapprobation. They are carried in procession through the streets from midnight till 3 a.m. on the 9th day of the moon, and from 6 a. m. till 3 p. m. on the 10th of the moon; when they are cast into the water, after having been stripped of every article of value about them.

The above are the principal Mahomedan festivals. In addition to these are the three following :

Ackkarry Chahur Shumba, 29th of Saffar.

Meideen Owleah feast, 1st to 11th Rabialakir.

Nagore Merah Owleah, 1st to 10 Jumadialakir.

### *Hindu Division of Time.*

The Hindus of Southern India divide the day (in Tamil *Nāl*) into four watches, and the night into the same number ; the day being considered to extend from sunrise to sunset. The watches are again divided into *ghurees*, (in Tamil *Nāl*) which are 24 minutes each in length. As in the summer the days are longer than the nights, each day-watch will then be longer than any watch of the night, though, from the necessity of each watch comprising an exact number of *ghurees*, there will generally be the difference of 1 *ghuree* between two watches of the same day. There is much variation in this respect, and although, in the latitude of India, the difference is not so great as it would in a country more towards the north. it is still so inconvenient that the Natives of India rarely understand their own method of dividing the day, and readily adopt the English mode, when they are in the neighbourhood of one of our stations.

In order to explain the mode of subdividing the watches, we shall detail the correspondence of *ghurees* with our hours in March and September, when the days and nights are equal ; and when, in consequence, more regularity may be expected than at other seasons. It must be remembered that a *ghuree* contains 24 minutes, and thus 60 *ghurees* make up the 24 hours ; 30 *ghurees*, therefore make up the time between sunrise and sunset at this season—if these 30 *ghurees* were equally divided between the four watches, giving 7 *ghurees* and half to each watch, their correspondence with our hours would be easily made.

The Week of 7 days, is called *vāram*, each day or *kilamai* being called after the Sun, Moon, or one of the planets : as follows.

Nayar <i>kilamai</i> , the day of the..			Sun	or	Sunday
Tingal	"	"	.. Moon	"	Monday
Sevvai	"	"	.. Mars	"	Tuesday
Budan	"	"	.. Mercury	"	Wednesday
Viyala	"	"	.. Jupiter	"	Thursday
Velli	"	"	.. Venus	"	Friday
Shani	"	"	.. Saturn	"	Saturday

The Month is called *māsam*. There are 12 months, of 30 and 31 days irregularly, but so arranged that the beginning of each Tamil year (1st day of the month Chittiri) corresponds either with the 11th, 12th, or 13th of April. Their order is as follows :—

1. Chittiri begins about 12th of April	7. Urppasi begins about 12th of Oct.
2. Vaifai " 12th of May	8. Kartigai " 12th of Nov.
3. Ani " 12th of June	9. Margali " 12th of Dec.
4. Adi " 12th of July	10. Tai " 12th of Jan.
5. Avani " 12th of Aug.	11. Masi " 12th of Feb.
6. Puritai " 12th of Sep.	12. Paunguni " 12th of Mar

The year is called *varsham*.



*Hindu Chronology.*

The natives of India use a great variety of epochs, some of which are but little understood, even by themselves, and almost all are deficient in universality and uniformity, so that the same epoch nominally will be found to vary many days, or even a year, in different provinces.

The solar, or more properly, the sidereal year, is that which is most in use for public business, particularly since the introduction of European power into India. This year is calculated by the Indian astronomers at 365 days, 7 hours, 12 minutes 30 seconds, or, according to others, 36 seconds. Therefore in sixty Indian years there will be a day more than in sixty Gregorian years. The difference arises from not taking into consideration the procession of the equinoxes, being equal in reality to something more than 20 minutes, though by them calculated at 23 minutes.

The luni-solar computation is not at present so common as it formerly was, although still much used in some parts of India, and common every where in the regulation of festivals, and in domestic arrangements. But the solar and luni-solar forms may be used with most of the Indian eras, though some more particularly effect one form and some the other.

The luni-solar mode varies in different provinces, some beginning the month at full moon, others at new moon: We shall describe that beginning by the full moon, which is used in Bengal; the other method will be easily understood when this is known. Each year begins on the day of full moon preceding the beginning of the solar year of the same date. The months are divided into halves, the first of which is entitled *badi*, or dark, being from the full moon to the new, and the last *sudi* or bright, from new to full moon. These divisions are sometimes of 14 and sometimes of 15 days, and are numbered generally from 1 to 15, though the last day of the *badi* half is called 15, and that of *sudi* is called 30. By a complicated arrangement, a day is sometimes omitted, and again a day is intercalated, so that, instead of going on regularly in numerical order, these days may be reckoned 1, 1, 2, 3, 4, 5, 6, 7, 8, 10. The subject is enveloped in some obscurity, and it will be perhaps sufficient to observe that the time of a lunation is divided into 30 parts, called *tiths*, and when two *tiths* occur in the same solar day, that day is omitted in the lunar reckoning, and restored, by intercalation at some other period. When two full moons occur in one solar month, the month also is named twice, making a year of 13 months. In the case, also, of a short solar month, in which there would be no full moon, the month would be altogether omitted. All these circumstances render the luni-solar computation a matter of much difficulty; and to reduce it exactly to our era would require a perfect knowledge of Hindoo astronomy. But as the solar reckoning is by far the most general, we shall only observe that the lunar month precedes the solar month by a lunation at most, and consequently a lunar date may be nearly known from the solar time, which is of easy calculation.

We shall begin by the eras which are generally known, and follow with those of more limited use.

**THE CALIYUG.**—This era is the most ancient of India, and dated from a period 3101 years before Christ. The year begins with the entrance of the sun into the Hindoo sign *Aswin*, which is now on the 11th April, N. S.

In the year 1600 the year began on the 7th April, N. S. from which it has now advanced 4 days, and, from the procession of the equinoxes, is still advancing at the rate of a day in sixty years: the number produced by subtracting 3102 from any given year of the Caliyug will be the Christian year in which the given year begins.

The era of SALIVAHNA may be joined here to that of the Caliyug, being identical with it as to names of months, divisions and commencement. It is 3179 years more recent, and therefore began 77 years since our era. It is much used in the southern and western provinces of India, and papers are frequently dated in both eras. The years of this era are called Saca. The number 77 must be added to find the equivalent year of the Christian era. Both these eras are most commonly used with solar time. This is the era almost exclusively used in the Straits Settlement by Hindoo emigrants from southern India and their descendants.

The Hindus of South India have a Cycle of 60 years, the corresponding Christian years being shown in the Table below. The present Cycle began in 1807 and the next Cycle will begin again with the year Prabhava. (1867.) The year begins about the 12th of April.

Name and number of the Year of Cycle.			Name and number of the Year of Cycle.		
	A. D.	A. D.		A. D.	A. D.
Prabhava ..	1..	1747 and 1807	Vikari ..	33..	1779 and 1839
Vibhava ..	2..	1748	Sarvari ..	34..	1780
Sukkila ..	3..	1749	Plava ..	35..	1781
Pramoddita ..	4..	1750	Subhacrittu ..	36..	1782
Prijotpati ..	5..	1751	Sobhacrittu ..	37..	1783
Angirasa ..	6..	1752	Kròdhi ..	38..	1784
Srimuga ...	7..	1753	Visvavas ..	39..	1785
Bhava ..	8..	1754	Parababha..	40..	1786
Yuva ..	9..	1755	Plavanga ..	41..	1787
Dhātu ..	10..	1756	Kilaka ..	42..	1788
Iswara ..	11..	1757	Saumia ..	43..	1789
Vehudhania ..	12..	1758	Sadbàranà..	44..	1790
Pramadi ..	13..	1759	Viròdhicrit ..	45..	1791
Vikkrama ..	14..	1760	Paridhavi ..	46..	1792
Visha ..	15..	1761	Pramadicha ..	47..	1793
Chitrabānu ..	16..	1762	Alnanda ..	48..	1794
Swabānu ..	17..	1763	Ratchasa ...	49..	1795
Tarana ..	18..	1764	Nala ...	50..	1796
Pārtiva ..	19..	1765	Pingala ..	51..	1797
Viya ..	20..	1766	Kālayukti ..	52..	1798
Sarvajit ..	21..	1767	Siddharti ..	53..	1799
Sarvadhari ..	22..	1768	Raudri ..	54..	1800
Viròdhi ..	23..	1769	Dumadi ..	55..	1801
Vikriti ..	24..	1770	Dundumi ..	56..	1802
Kbāra ..	25..	1771	Rudiròdguri ..	57..	1803
Nandana ..	26..	1772	Ruttatchi ..	58..	1804
Vijya ..	27..	1773	Kròdhana ..	59..	1805
Jya... ..	28..	1774	Atchya ..	60..	1806
Manmatha..	29..	1775	Prabhava ..	1..	1807

Dunsmuki ..	30..	1776	1836	Vibhava ..	2..	1806	1866
Evilambi ..	31..	1777	1837	Sukkila ..	3..	1809	1869
Vilambi ...	32...	1778	1838				

The era of **VICRAMADITYA**, which has its name from a sovereign of Malwa, may also be placed here, as it uses the same months as the two above mentioned, but it is more generally used with lunar time; this era is much employed in the north of India, and its years are called Samvat. It began 57 years before Christ, and that number must be deducted to bring it to our era.

In Guzerat this era is used, but it begins there about the autumnal equinox.

The following are the names of the months of the Hindustani year.

Bysakh,	April & May	Katick, Oct. & November
Jeth,	May & June	Aghan, Nov. & December
Asar,	June & July	Pous, Dec. & January
Sawan,	July & August	Magh, Jan. & February
Bhadon,	Aug. & September	Pagoon, Feb. & March
Kooner, } or Asin, }	Sept. & October	Chyt. March & April

These months all begin on the days of the entrance of the sun into a sign of the Hindu Zodiac, and they vary from 30 to 32 days in length, though making up 365 days in the total, in common years, and 366 in leap years. The intercalation is made when and where it is required, not according to any arbitrary rule, but by continuing the length of each month, until the sun has completely passed each sign. This will bring about 26 leap years in every century. It would require long and complicated calculations to find exactly the commencement and duration of each month, but we shall not err more than a day or two by considering them to be of 30 and 31 days alternately.

The Bengali year appears to have been once identical with the Hejira; but the solar computation having been subsequently adopted, of which the years exceed those of the Hejira by 11 days, it has lost nearly 11 days every year, and is now about 9 years later, the year 1245 of the Hejira beginning in July, 1829, and the Bengali year 1286 beginning 13th April of the same year.

The number 563 must be added to bring this to the Christian era. The Bengali months are similar to those of the Hindustani, given before, differing only in dialect. They are as follow, according to the orthography of the English residents there.

Bysakha,	April & May	Kartikh, Oct. & November
Jaishta,	May & June	Agrahayna, Nov. & December
Asarha,	June & July	Poush, Dec. & January
Shrabana,	July & August	Magh, Jan. & February
Bhadrah,	August & Sept.	Chalgun, Feb. & March
Ashwina,	Sept. & October	Chaitra. Mar. & April

The first of Bysakha is now on the 13th April, and in our leap years on the 12th April. There is, however, a difference of one day in about 60 years, as observed before, in speaking of the eras of Caliyug, &c.

It may be observed that, notwithstanding this variety of dates, the months agree pretty nearly. Thus, Poush in all the eras begins some what before the winter solstice, and is followed by Magh, &c.

The era of Parasurama is used in Malayala in the south of India. This era began in the year 1176 B. C. and is divided into cycles of 1000 years, and at the end of 1000 years, instead 1001 the next year was called 1. The first cycle ended 176 B. C., the second 825 A. D., and the third should have finished in 1825, in which case the present year would have been 36. But whether from inattention or otherwise, the end of the third cycle was not noticed, and they call 1005, the year which began on the 15th September, 1829. The year 177 of the second cycle began August 17th, A. D. 1, but the year, like the other years of India, advancing one day in about 60 years, now begins as above stated. In our leap years the 14th of September will agree with its commencement.

A Cycle of 90 years, called Grahaparivriti, is used in the southern provinces of India. The year 1840 corresponds with the 64th year of the 21st cycle. The first cycle began 24 years before our era.

To reduce it to the Christian year, multiply the elapsed cycles by 90 add the odd years, then deduct 24 from the sum, and the remainder will be the year required.

The days of the week, as used by the Hindus of Bengal, are as follows :

Rubbeebar,	Sunday,	Brihaspoteebar,	Thursday,
Soambar,	Monday,	Shukrobar,	Friday,
Mongolbar,	Tuesday,	Sunneebar,	Saturday.
Boodbar,	Wednesday,		

The Fusly year, is pretty generally known in India, and is supposed to be derived from the Hegira. One or two eras are used in India by this name, being chiefly used in revenue accounts, its commencement alone is much attended to, the subdivisions being neglected.

The Fusly year, as used in Bengal, begins with Aussin, in September. The year is lunar, and the full moon preceding the autumnal equinox is the first day. The date also differs from the common Fusly, being now 1209. This mode of computation was established in Upper India in A. C. 1556 and in South India A. C. 1638.

### THE CHINESE ERA.

Like all the nations of the north east of Asia, the Chinese reckon their time by cycles of 60 years, instead of numbering them as we do, they give a different name to every year in the cycle. As all those nations follow the same system, we shall detail it here more particularly. They have two series of words, one of ten, and the other of twelve words; a combination of the first words in both orders is the name of the first year; the next in each series are taken for the second year; and so the tenth: in the eleventh year, the series of ten being exhausted they begin again with the first, combining it with the eleventh of the second series: in the twelfth year, the second word of the first series is combined with the twelfth of the second; for the thirteenth year, the combination of the third word of the first list with the first of the second list is taken, that list also being now exhausted. To make this clearer we shall designate the series of ten by the Roman letters, that of twelve by the italics, and the whole cycle of 60 will stand thus—

1	a	a	16	f	d	31	a	g	46	f	k
2	b	b	17	g	e	32	b	h	47	g	l
3	c	c	18	h	f	33	c	i	48	h	m
4	d	d	19	i	g	34	d	k	49	i	a
5	e	e	20	k	h	35	e	l	50	k	b
6	f	f	21	a	i	36	f	m	51	a	c
7	g	g	22	b	k	37	g	a	52	b	d
8	h	h	23	c	l	38	h	b	53	c	e
9	i	i	24	d	m	39	i	c	54	d	f
10	k	k	25	e	a	40	k	d	55	e	g
11	a	l	26	f	b	41	a	e	56	f	h
12	b	m	27	g	c	42	b	f	57	g	i
13	c	a	28	h	d	43	c	g	58	h	k
14	d	b	29	i	e	44	d	h	59	i	l
15	e	c	30	k	f	45	e	i	60	k	m

The series of 10 is designated in China by the name of teen kan, or ecclesiastical signs.

The Chinese months are lunar, of 29 days each. Their years have ordinarily 12 months, but a thirteenth is added whenever there are two new moons while the sun is one sign of the Zodiac. This will occur seven times in nineteen years.

The knowledge of the Chinese in astronomy has not been sufficient to enable them to compute their time correctly. In 1290 A. D., the Arab Jamaludin composed a calendar for them, which remained in use until the time of the Jesuit School, who was the director of their calendar until 1664. It then remained for five years in the hands of the natives, who so deranged it, that when it was again submitted to the direction of the Christians, it was found necessary to expunge a month to bring the commencement of the year to the proper season. It has since that been almost constantly under the care of Christians.

The first cycle, according to the Romish Missionaries, began February 2, 397 B. C.\* We are now therefore in the 72nd cycle, the 11th of which began on the 10th Jvly 1860. To find out the Chinese time, multiply the elapsed cycle by 60, and add the odd years; then, if the time be before Christ subtract the sum from 2398; but if after Christ, subtract 2397 from it; the remainder will be the year required.

The Chinese frequently date from the year of the reigning Sovereign, and in that case there is no way of having the corresponding dates but by a list of Emperors. We subjoin a list of those who have reigned for the last two centuries.

#### TARTAR DYNASTY.

He-tsung began to reign, A. D. .. ..	1616
Chwang-lee. .. ..	1627
Shun-che. .. ..	1644
Kanghe. .. ..	1662

\* Dr. Morrison carries it back to the 61st year of Hwang-te 2596 B. C. making the present year to fall in the 74th cycle; but, according to the celebrated historian Choofoo-tsze, Hwang-te reigned about 2700 B. C., making 75 and a half cycles from that period, which is, probably, more correct than either of the above statements.

Yung-ching.	..	..	..	..	..	..	1723
Keen-lung. ..	..	..	..	..	..	..	1736
Kee-king. ..	..	..	..	..	..	..	1797
Taou-kwang.	..	..	..	..	..	..	1821
Hien Fung or Hum Hong.	..	..	..	..	..	..	1851

### THE JAPANESE ERA.

The Japanese have a cycle of 60 years, like that of the Chinese, formed by combination of words of two series. The series of ten is formed of the names of the elements of which the Japanese reckon five, doubled by the addition of the masculine and feminine endings, je and to.

1 Kino-je	}	wood.	The series of 12 is made up of the signs of the Zodiac.
2 Kino-to			
3 Fino-jee	}	Fire.	1 ne, rat,
4 Fino-to			2 oos, ox.
5 Tsutsne-je	}	earth.	4 torra, tiger,
6 Tsutsne-to			3 ov, hare,
7 Kanno-je	}	metal.	5 tats, dragon,
8 Kanno-to			6 mi, serpent,
9 Midsno-je	}	water.	7 ooma, horse.
10 Midsno-to			8 tsitsuse, sheep,
			9 sar, ape,
			10 torri, hen,
			11 in, dog,
			12 y, hog.

By substituting these words for the letters in the cycle, under the head of China, the Japanese names are found. Thus, the first year of a cycle is called Kino je ne, the 35th tsutsno-je in, and so on. The cycles coincide with those of Chinese; but a name is given to them instead of numbering them. Their years begin in February, and are luni-solar, of 12 and 13 months, with the intercalation as before mentioned under the head of China. The first cycle is said to begin 660 B. C.; but this cannot be correct, unless some alteration has taken place, as the Chinese cycle began 657 B. C. We know, however, too little of Japan to pronounce positively respecting it, but thus far it is certain, that the cycle now coincides with that of the Chinese.

### THE ERA OF THE ARMENIANS.

The ARMENIAN ERA commenced on Tuesday, July 9th, A. D. 552, the period when the council of Tiben, or the Armenians, confirmed the condemnation of the council of Chalcedonia, which was pronounced in A. D. 536; and by which they completed their schism. The Armenian year consists of twelve months of thirty days each, with five epagomenæ.\* It is entirely vague, without any intercalation, and anticipates the Julian year by one day in every four years. This era was adopted in all acts and dates of letters; but at the same time the Armenians used another year, which was properly the ecclesiastical year, and which was adopted in the liturgy to regulate the celebration of Easter and the Moveable Feasts. The ecclesiastical year was fixed, by means of a sixth epagomene which was added every fourth year; the first day of that

\* Days added to complete the solar year.

year, which began in the Armenian month Navasardi, was the 11th of August of the Julian year. Afterwards, when the Armenians became reconciled with the Latin church, about the year of our Lord 1330, they adopted the form of the Julian year. The Armenian months were—

Navasardi	...	August 11.	Michiki	...	February 7.
Huerri	...	September 10.	Arieki	...	March 9.
Sahmi	...	October 10.	Anki	...	April 8.
Dre Thari	..	November 9.	Marieri	...	May 8.
Khagueths	..	December 9.	Margats	..	June 7.
Arats	..	January 8.	Huetits	..	July 7.

Accliacz, or the five epagomenæ, and the sixth in the abundant year.

To ascertain the day of the week on which the Armenian year begins, divide the year by 7; if there be no remainder, the year begins on a Monday; if there be a remainder, the day which occurs under that figure in this table will be the first of the Armenian year :

0	1	2	3	4	5	6
M.	Tu.	W.	Th.	F.	Sa.	S.

To reduce the Armenian year to the Julian, divide the given year by 4, and subtract the quotient from 191, adding 365 to 191 if necessary; the remainder will be the days from the beginning of the Julian year; and the Armenian date (lessened by 1, if 365 has been added to 191) added to 551, will give the Christian year.

To reduce ecclesiastical Armenian years to our time, add 551 years and 222 days.

In leap-years, one day must be subtracted from the 1st day of March to the 10th of August

### THE CALENDAR OF THE JEWS.

Until the fifteenth century, the Jews usually computed their time by the ERA OF SELEUCIDES; namely, 311 years and 4 months before Christ; but, since the end of that century, they have dated from the Creation, which they consider to have occurred 3760 years and 3 months before the commencement of the Christian era.

The Judaic year is luni-solar, and thus consists either of twelve or thirteen months; and every month has twenty-nine or thirty days. The Civil year commences in the month Tisri, on, or immediately after, the new moon following the autumnal equinox. The months, with the number of days in each, are,—

1.	Tisri.. ..	30 Days.	(Veadar .. ..	30 Days.)
2.	{ Marchesvan, Chesvan, or Bul .. .. }	29 or 30	7. Nissan, or Abib	30
			8. Jyar, or Zius	29
			9. Sivan.. ..	30
3.	Chisleu ..	29 or 30	10. Thammuz ..	29
4.	Thebet ..	29	11. Ab .. ..	30
5.	Sebat ..	30	12. Elul .. ..	29
6.	Adar ..	28	in intercalary years { 30	

The month Veadar is omitted in years of twelve months. The average length of the year of twelve months is 354 days; but, by varying the length of the months Marchesvan and Chisleu, it may consist of 353 or 355 days. In the same manner, the year of thirteen months may

contain 383, 384, 385 days. In a period of nineteen years, twelve years have twelve months each; and seven have thirteen months. The following Table of nineteen years exhibits the number of months in each year, as well as the first day of the Judaic year, reduced to the New Style: the first day will not always be quite accurate, as in some years certain lucky and unlucky days require the postponement of a day. The year must be divided by 19, and the remainder will show the year of the cycle. If there be no remainder, it is the nineteenth year.

#### Year of the Cycle.

The 1st begins about the 2nd of October, and consists of 12 Months.

2nd .. ..	22nd of September	..	12
3rd .. ..	10th " "	..	13
4th .. ..	29th " "	...	12
5th ... ..	19th " "	..	12
6th ... ..	8th " "	..	13
7th .. ..	27th " "	..	12
8th .. ..	16th " "	..	13
9th .. ..	5th of October	..	12
10th .. ..	25th of September	..	12
11th .. ..	14th " "	..	13
12th .. ..	2nd of October	..	12
13th .. ..	21st of September	..	12
14th ... ..	10th " "	..	13
15th .. ..	29th " "	..	12
16th .. ..	18th " "	..	12
17th .. ..	7th " "	...	13
18th .. ..	25th " "	..	12
19th .. ..	14th " "	..	13

To reduce the Jewish time to our own, subtract 3761 from the Judaic year, and the remainder will be the year of our Lord. The beginning of the year may be ascertained by the above Table, and the months must be counted from that time.

**EXAMPLE.**—Required the 1st of Chisleu, 5588.

5588	19)5588(294
3761	38
<hr/>	<hr/>
A. D. 1827	178
	171
	<hr/>
	.78
	76
	<hr/>
	.2
	<hr/>

The remainder (2) shows that the year 5588 is the second of the cycle, and, consequently, that it begins on the 22nd of September. The 1st of Chisleu will, therefore, be about the 20th of November, 1827.

The Ecclesiastical year of the Jews begins six months earlier, with the month of Nisan, to commemorate their return to Egypt, which took place in that month. By the Ecclesiastical year their fasts, feasts, and every thing relating to religion are regulated; consequently, when the



given year is Ecclesiastical, a year must be deducted in the date from Nisan to Elul, inclusive.

The Jews frequently, in their dates, leave out the thousands, which they mark by placing letters, which indicate that it is "according to the lesser computation."

Though various other epochs, from the Creation, have been adopted by the Jews, it is unnecessary, for practical purposes, to allude particularly to them, as it is only the above-mentioned which were in general use.

### SIAMESE MODE OF DIVIDING TIME.

The 24 hours of each day are divided into two equal parts. The day-time is called WAX, (*sound à as a in WHAT*). The night time K'UX, (*the apostrophe denotes that the letter before it is aspirated.*) The former uniformly begins at 6 o'clock A. M.; the latter at 6 P. M. The hours of the forenoon are numbered 1, 2, 3, &c. up to 6 or mid-day. The hours of the afternoon are designated by the same numbers. Time in the forenoon is called P'ĒLA CHOW, (*è sounded as e in PREY*); time in the afternoon, P'ĒLA BĀI. The word denoting any hour in the day time is MŌNG; that for night time is T'ŌOM. In expressing 9 A. M. they say, 'SĀM (3rd) MŌNG BĀI';—9 P. M. 'SĀM T'ŌOM.

The hours of the night are counted in succession from 1 to 12. Six o'clock A. M. is the close of their 12th hour of the night. Each night is divided into four watches of three hours each, and each watch is called a YĀM.

Siamese months are designed to be lunar months, but they often vary from the moon a day or more. Each month is divided into two parts, viz; K'ANG K'ŌN, (Waxing), and K'ANG RAAN, (Waning). The former has always 14 days; but the latter has 15 days every 2nd, 4th, 6th, 8th, 10th, and 12th month; and 14 days every 1st, 3rd, 5th 7th, & 11th month. Hence six of their months have 30 days, and six. 29 days=354 to 12 months, which wants about 11 days to make up a full solar year. To compensate for this, they have an intercalary month of 30 days, once in 2 or 3 years—their last leap-year was 1858. By this plan there is still a loss of about three days in 19 years, which is supplied by adding a day to their 7th month from time to time, as their Brahmin astrologers see to be necessary, which they have done in 1860.

### TABLE OF SIAMESE TIME.

60 W'nat'ee make	1 Nat'ee or minute
6 Nat'ee	1 Bāt
10 Bāt	1 Mong or T'Ōom (hour)
12 Mong	1 Wān (day)
12 T'Ōom	1 K'ūn (night)
29 or 30 wān & k'ūn	1 Du'an (month)
12 „ 13 Du'an make	1 Pee (year)
10 Pee	1 Sĕk, or cycle or ten

They have no word to denote a week of time. But each day of the seven has its appropriate name and number. Sunday is their first, and Saturday their 7th day. By the recurrence of the 1st and 7th days they are reminded of the lapse of seven days as we are by the word week.

The days of the week are.

1st, Wán At'ít, (day of the Sun)	Sunday.
2nd, Wán Chan (day of the Moon)	Monday.
3rd, Wán Angk'an (day of Mars)	Tuesday.
4th, Wán P'òt, (day of Mercury)	Wednesday.
5th, Wán Prähät, (day of Jupiter)	Thursday.
6th, Wán Sòk, day of Venus)	Friday.
7th, Wán Sòw, day of Saturn)	Saturday.

Their twelve months are each designated by its appropriate number, excepting the 1st and 2nd. The former, instead of being called the 1st month, is called DUÁN ái, (month ái); the latter, DUÁN Yéé (month yéé). The next succeeding month is called DUÁN Sám, (3rd month); the next, DUÁN Sèé, (4th month); and so on through the twelve.

The Siamese have two cycles, one within the other. The greater is 12 years, the smaller 10. The name of the former is PEX, the latter Sòk. Every year of each kind of cycle has its own specific name.

The years of the cycle of 12 are,

1st Pee Ch'òòt	Year of the	Rat.
2nd Pee Ch'áldò	" "	Cow.
3rd Pee K'àn	" "	Tiger.
4th Pee T'aw	" "	Rabbit.
5th Pee M'arong	" "	Great Dragon.
6th Pee M'aseng	" "	Small Dragon.
7th Pee M'ameeá	" "	Horse.
8th Pee M'amaa	" "	Goat.
9th Pee W'awk	" "	Monkey.
10th Pee R'aka	" "	Cock.
11th Pee Chaw	" "	Dog.
12th Pee K'òon	" "	Hog.

The years of the cycle of 10 are

Ekasòk.	1st of the Cycle.	Ch'awsòk	6th of the Cycle.
T'osòk	2nd " " "	Säpp'askò	7th " " "
Treenisòk	3rd " " "	Akt'isòk	8th " " "
Chättawasòk	4th " " "	Nöp'isòk	9th " " "
Bënyasòk	5th " " "	Sämrèt'isòk	10th " " "

In writing the number of their Era, the name of each cycle as it chances to be, is always given in the same connection: *e. g.* this year (Jan. 1860) is 1231 PEX M'AMAA EKASÒK.

Every Siamese is taught to remember carefully the name of each year, of the cycle of 12, and by no means to forget the name of the particular year in which he was born. So that at any time, when he would count up the number of the years he has lived, he begins by repeating the names of the years in succession from the one that gave him birth, until he comes back again to his birth-year, keeping tally with his fingers. Thus he counts on until he makes another cycle of twelve, more or less, as the case may be in the regard to his age. He can tell quite certainly whether his age is within the 1st cycle of 12, or the 2nd, or 3d, or 4th. But if he be upwards of 60 years old, he is liable to get bewildered in his reckoning, for the want of the habit of counting his years by the year of the Era, in which he was born. This the Siamese never do.

The Siamese sacred Era is reckoned from the time it is supposed Buddha died, which is 2403 full years the 5th of May 1860. This reckoning is never used except in their religious matters. It is denominated PÖÖRÄ SÄKKÄNÄR (Era of Buddh). Their civil Era, called CHÖÖLÄ SÄKKÄNÄR (little Era,) is reckoned from the time when P'RÄ RÖÖANG a Siamese king of great celebrity established it, and that is 1231 full years the 22nd March 1860. Siamese in writing their dates always show 1st, the year of their Era; 2nd the day of the week; 3d, the day of the waxing or waning moon; 4th the number of the month; 5th, the name of the year; and 6th, the particular year of the cycle of 10. Their mode of showing the day of week, day of moon, and the month is very concise. They make the sign of plus like this.—At the end of the left hand arm they write with a figure the number of the week day; at the end of the upper arm, the number of the day of the waxing moon; at the lower arm, the day of the waning moon; and at the end of the right hand arm, the number of the month. Example, 1—2. This reads Sunday, the 12th day of the waning moon, the 2nd month. 12

The following table will show the names of the years of the 12 year cycle since 1804. A. D.

1804 Rat	5 Cock	6 Horse
5 Cow	6 Dog	7 Goat
6 Tiger	7 Hog	8 Monkey
7 Rabbit	8 Rat	9 Cock
8 Great Dragon	9 Cow	1850 Dog
9 Small Dragon	1830 Tiger	1 Hog
1810 Horse	1 Rabbit	2 Rat
11 Goat	2 Great Dragon	3 Cow
12 Monkey	3 Small Dragon	4 Tiger
13 Cock	4 Horse	5 Rabbit
14 Dog	5 Goat	6 Great Dragon
15 Hog	6 Monkey	7 Small Dragon
16 Rat	7 Cock	8 Horse
17 Cow	8 Dog	9 Goat
18 Tiger	9 Hog	1860 Monkey
19 Rabbit	1840 Rat	1 Cock
1820 Great Dragon	1 Cow	2 Dog
1 Small Dragon	2 Tiger	3 Hog
2 Horse	3 Rabbit	4 Rat
3 Goat	4 Great Dragon	5 Cow
4 Monkey	5 Small Dragon	

### THE CHRISTIAN ERA.

The following account is added as somewhat more in detail than that given under the head *English Style* ante p. 22.

The Christian era, used by almost all Christian nations, dates from January 1st, in the middle, of the fourth year of the 19th Olympiad, in the 753rd of the building of Rome, and 4744th of the Julian period. It was first introduced in the sixth century, but was not very generally employed for some centuries after.

The Christian year in its division follows exactly the Roman year; and

consists of 365 days for three successive years, and of 366 in the fourth year, which is termed leap year. This computation subsisted for 1000 years throughout Europe without alteration, and is still used by the followers of the Greek church: other Christians have adopted a slight alteration, which will be shortly explained. The simplicity of this form has brought it into very general use, and it is customary for astronomers and chronologists, in treating of ancient times, to date back in the same order from its commencement. There is unfortunately a little ambiguity on this head, some persons reckoning the year immediately before the birth of Christ, as 1 B. C., and others noting it with 0, and the second year before Christ with 1, making always one less than those who use the former notation. The first is the most usual mode, and will be employed in all our computations.

The Christian year (or Julian year, arranged as we have shewn,) was 11' 11" too long, amounting to a day in nearly 129 years: and towards the end of the sixteenth century, the time of celebrating the church festivals had advanced ten days beyond the periods fixed by the Council of Nice in 325. It was, in consequence, ordered by a Bull of Gregory XIII, that the year 1582 should consist of 355 days only, which was effected by omitting 10 days in the month of October, viz. from the 15th to the 24th. And to prevent the recurrence of a like irregularity, it was also ordered, that in three centuries out of four, the last year should be a common year, instead of a leap year, as it would have been by the Julian calendar. The year 1600 remained a leap year, but 1700, 1800, and 1900 were to be common years. This amended mode of computing was called the "new style", and was immediately adopted in all Catholic countries, while the old style continued to be employed by other Christians, gradually the new style was employed by Protestants also. The last ten days of 1699 were omitted by the Protestants of Germany, who, in consequence, began the year 1700 with new style, and in England the reformed calendar was adopted in the year 1752 by omitting 11 days, to which the difference between the styles then amounted. The alteration was effected in the month of September, the day which would have been the third, being called the fourteenth. The Greeks and Russians still use the old style.

To turn the old Style to the New.

From the alteration of style to the 29th Feb. 1700, add 10 days.

From 1st March 1700 to 29th Feb. 1800, add 11 days.

— — 1800 — — 1900, — 12 days.

— — 1900 — — 2000, — 13 days.

Examples, 17th March, 1801 O. S. is 29th March 1801, N. S.

19th Feb. 1703 O. S. is 2nd March 1703, N. S.

24th Dec. 1690 O. S. is 3rd Jan 1691, N. S.

20th Dec. 1829 O. S. is 1st Jan 1830 N. S.

There will sometimes be a difference of one year in a date, from the circumstance that in many countries, the time of beginning the year has varied. In England until the year 1752, the year was considered to begin on the 25th of March, any date, therefore from the first of January to the 24th of March will be a year too little. It had been the prac-

tice, for many years preceding the change of style, to write both years, by way of obviating mistakes, as 1st of February, 1707/8 or 1708 meaning the year 1708, if begun in January, or 1707 if begun in March.

In some countries, Easter-day was the first day of the year, in others the first of March; and in others, again, Christmas-day; but no certain rule can be given, as even in the same nation different provinces followed a different custom.

All nations, at present using either the Old or New Style, begin the year on the 1st of January.

The CREATION has been adopted as an epoch by Christian and Jewish writers, and would have been found very convenient, by doing away the difficulty and ambiguity of counting before and after any particular date, as is necessary when the era begins at a later period. But unfortunately, writers are not agreed as to the precise time of commencing. We consider the creation as taking place 4004 years B. C.; but there are a hundred and forty different variations in this respect.

### THE TIMES AT WHICH DIFFERENT NATIONS HAVE BEGUN, OR BEGIN, THE CIVIL DAY.

Ancient Babylonians, ..	<i>Sunrise.</i>	Ancient Umbrians, ..	<i>Mid-day.</i>
Ancient Persians ..	_____	Astronomers of all nations ..	_____
Ancient Syrians ..	_____	Ancient and modern Ara-	
Ancient Jews ... ..	_____	bians .. ..	_____
Nearly all Eastern nations	_____	Ancient Egyptians, ..	<i>Midnight.</i>
Inhabitants of Majorca,		English .. ..	_____
Minorca, and Ivica ..	_____	French .. ..	_____
The Greeks, and the inha-		Germans .. ..	_____
bitants of the islands of		Dutch .. ..	_____
the Archipelago ..	_____	Russians ... ..	_____
Athenians, and the inha-		Spaniards .. ..	_____
bitants of Attica ..	_____	Swiss .. ..	_____
The Marcomanni ..	_____	Portuguese ... ..	_____
Austrians ... ..	_____	Danes .. ..	_____
Turks .. ..	_____	Swedes, Laplanders, Ameri-	
Bohemians ... ..	_____	cans, and Araucanians ..	_____
Silesians ... ..	_____	Modern Chinese .. ..	_____
Italians ... ..	_____		

### A LUSTRUM.

A LUSTRUM, which was used by the Romans, is a period of five years; or, more properly, the completion of fifty months, at the end of which term a census was taken of the population.

### A GENERATION.

A GENERATION is the interval of time elapsed between the birth of a father and the birth of his son, and was generally used in computing considerable periods of time, both in sacred and profane history. The interval of a generation is consequently of uncertain length, and depends on the standard of human life, and whether the generations are reckoned by eldest, middle, or youngest sons. Thirty-three years have usually

been allowed as the mean length of a generation, or three generations for every hundred years.\*

In compiling pedigrees, great attention is necessary to the number of generations in any given period, as they form a guide to the probability of persons having sprung from any particular individual.

#### CANONICAL HOURS.

The Catholic church divided the twenty-four hours into seven parts, termed **MATINS** or **LAUDS**, **PRIME**, **TIERCE**, **SEXT**, **NONES**, **VESPERE**, and **COMPLETORIUM** or **COMPLINE**, to each of which, proper services were assigned. These divisions, together with others called **WATCHES**, were generally used by ecclesiastics, instead of the usual hours of the Day; and, as they often occur in *Chronicles* and *Chartularies*, an explanation of them is desirable.

**MATINS**, or **MATUTINA**, or **LAUDS**; from Midnight until Prime. The morning service commenced about 3 A. M., and was called *Matina*, or *Lauds*.

**PRIME**, or **PRIMA**; from about 6 A. M. until Tierce. This service immediately succeeded *Matins*. "If the office of *Lauds* be finished by daybreak, as is fit, let them begin Prime; if not, let them wait for daylight."†

**TIERCE**, or **TERTIA**; 9 A. M., to Sext.

**SEXT**, or **SEXTA**; from about 12, or Noon, to Nones.

**NONES**, or **NONA**; from about 2 or 3 P. M., to **VESPERE**.

**VESPERE**, or **VESPERA**; from about 4 o'clock to **COMPLAIN**, or second *Vesper*.

**COMPLETORIUM**, or **COMPLINE**. Second *Vesper*, about 7 o'clock.

Though not a Canonical hour, it may be useful to add, to these divisions of time, an explanation of **UNDERN**, a word often used, in the thirteenth and fourteenth centuries, for the third hour of the day, or 9 A. M.

The Night was also divided by ecclesiastics into **WATCHES**, in the following order:—

First Watch, which began at	6 P. M.
Second Watch .. .. .	9 P. M.
Third Watch .. .. .	12 P. M.
Fourth Watch .. .. .	3 A. M.

#### ERA OF THE REFORMATION.†

England (Wickliffe) ..	1360.	PROTESTANTS first so called,	
Bohemia (Huss) ...	1405.	Sweden (Petri) .. ..	1550.
Germany (Luther) ..	1517.	Ireland (Brown) .. ..	1535.
Switzerland (Zuinglius) ..	1519.	England <i>Completed</i> (Cran-	
Denmark ... ..	1521.	mer, Bucer &c.) .. ..	1547.
France (Calvin) .. ..	1529.	Scotland (Knox) .. ..	1560.
		Netherlands .. ..	1566.

\* Hales's *New Analysis of Chronology and Geography*, vol. i. p. 80.

† *Erud. Theol. de Offic. Eccles.*, quoted in Fosbrooke's *British Monachism*.

‡ Hales's *Analysis of Chronology*, vol. i. p. 102.

## SUMMARY,

SHOWING THE CORRESPONDENCE OF THE PRINCIPAL EPOCHS, ERAS, AND PERIODS WITH THAT OF THE BIRTH OF CHRIST OR CHRISTIAN ERA.

Epochs, Eras, and Periods.	Months and years of Commencement.
The Grecian year of the world ..	September 1. B. C. 5588.
The ecclesiastical era of Constantinople .. .. }	March 21. or April 1. B. C. 5508.
The civil era of Constantinople..	September 1. B. C. 5508.
The Alexandrian era .. ..	August 29. B. C. 5502.
The ecclesiastical era of Antioch	September 1. B. C. 5492.
The Julian period ... ..	January 1. B. C. 4713.
The Mundane era .. ..	October, B. C. 4008.
The Jewish Mundane era .. ..	Vernal equinox, B. C. 3761.
The civil Jewish era .. ..	October, B. C. 3761.
The era of Abraham .. ..	October 1. B. C. 2015.
The destruction of Troy ... ..	June 12. or 24. B. C. 1184.
The epoch of the building of Solomon's Temple .. .. }	May, B. C. 1015.
The era of the Olympiads ..	{ New moon of Summer solstice, { July 1. B. C. 776.
The Roman era ... ..	April 24. B. C. 753.
The era of Nabonassar .. ..	February 26. B. C. 747.
The epoch of Daniel's 70 weeks	Vernal equinox, B. C. 458.
The Metonic cycle ... ..	July 15. B. C. 432.
The Calippic period .. ..	{ New moon of Summer solstice, { B. C. 330.
The Philippæan era .. ..	June, B. C. 323.
The Syro-Macedonian era ..	September 1. B. C. 312.
The Tyrian era .. ..	October 19. B. C. 125.
The Sidonian era .. ..	October, B. C. 110.
The Cæsarean era of Antioch ..	September 1. B. C. 48.
The Julian year .. ..	January 1. B. C. 45.
The Spanish era .. ..	January 1. B. C. 38.
The Actian era .. ..	January 1. B. C. 30.
The Actian era in Egypt .. ..	September 1. B. C. 30.
The Augustan era .. ..	February 14. B. C. 27.
The Pontifical Indiction..	Dec. 25. or Jan. 1. B. C. 3.
The Indiction of Constantinople	September 1. B. C. 3.
The vulgar Christian era .. ..	January 1. A. D. 1.
The destruction of Jerusalem ..	September 1. A. D. 60.
The era of the Maccabees .. ..	November 24. A. D. 186.
The era of Dioclesian ... ..	September 17. A. D. 284.
The era of Ascension ... ..	November 12. A. D. 296.
The era of Martyrs ... ..	February 28. A. D. 303.
The era of the Armenians .. ..	July 7. A. D. 552.
The era of the Hegira ... ..	July 16. A. D. 622.
The era of Yezdegird, or Persian era	June 16. A. D. 602.
The Gelalæan era .. ..	March 14. A. D. 1079.

SUMMARY,  
SHOWING THE CORRESPONDENCE OF THE PRINCIPAL EPOCHS, ERAS, AND  
PERIODS WITH THAT OF THE BIRTH OF CHRIST OF CHRISTIAN ERA.

Epochs, Eras, and Periods.	Months and years of Commencement.
The KALY YUGA* .. .. .	February 18 B. C. 3102.
The Era of BUDDHA's birth, by {	B. C. 1027.
Chinese account	
Ditto, his <i>nirvan</i> , in India, Cey- } B. C. 543.	
lon, Ava, Siam, &c. 1st year= }	
The Jain era of <i>Muhavira</i> 1st year	B. C. 629.
The SAMVAT (Sumbut) of Vi- }	
KRAMADI'TYA year 1= ⑤ }	March B. C. 56.
The SAKA (Shuk) of SALIVA- }	
HA'NA, ditto=equinox, .. }	A. D. 79.
The <i>Parasurāma</i> Cycle of 1000 }	
years, (1st year of 4th Cycle= }	September A. D. 825.
The <i>Grahaparivṛitha</i> do. of 90 }	
years, 1st year of 21st Cycle= }	A. D. 1777.
The <i>Vṛihaspati</i> (Jupiter's) Cycle of }	
60 years established in A. D. 966.	
———1st year of 84th Cycle, }	
(Surya Siddhanta,)= }	A. D. 1796.
———1st year of 83d Cycle, }	
(Telinga account)= }	A. D. 1807.
———1st year of 14th Cycle, }	
(Tibet account)= .. }	A. D. 1807.
———1st year of 75th Cycle, }	
(Chinese account)= }	A. D. 1804.
The Turkish or Ighary Cycle }	
of 12 years coincides with }	
Tibetan and Telinga Jovian }	
Cycle, in its initial year. .. }	
The <i>Balabhi Sambat</i> of Somnath, }	
1st year= .. .. . }	March A. D. 318.
The <i>Siva Singha Samvat</i> of Gu- }	
zerat, ditto .. .. . }	A. D. 1113.
The Burmese era of Prome, .. ditto	
—— vulgar epoch, .. .. ditto	A. D. 79.
—— sacred era (see Budha), ditto	A. D. 639.
—— grand epoch .. .. ditto	B. C. 543.
The Java era, <i>Ajisaka</i> , .. ditto	B. C. 691.
—— Bali era, .. .. ditto	A. D. 74.
The Nipal, <i>Newar</i> era, .. ditto	A. D. 81.
The Tibet, <i>me-kha-yga-tsho</i> , 403 }	A. D. 870.
year era .. .. ditto }	A. D. 622.
The <i>Tarikh-ilāhy</i> of the Emper- }	
or Akber, .. ditto .. }	„ A. D. 1556.

\* The first year being reckoned as 0, the year 1 accords with B. C. 3101.



Epochs, Eras, and Periods.	Months and years of Commencement.
The <i>Fusly</i> , revenue year of Upper India, (established in .. )	A. D.) 1556.
" " " " of South India, } (established in .. )	A. D.) 1638.
The <i>Vilyadati</i> ditto . of Orissa, } (established in .. )	A. D.) 1556.
The <i>Bengali sun</i> ditto . of Bengal, .. (established in )	A. D.) 1556.
The <i>Shukhor-sun</i> of the Marhattas, . (introduced in )	A. D.) 1344.
The <i>Juloos-sun</i> of Beejapore, ... } (Adil Shah II. ... )	A. D.) 1656.
The <i>Baj-abhishèk</i> of the Marhattas .. (Sivaji's reign .. )	A. D.) 1664.

## CHINESE MEASURES OF TIME.

(omitted *ante* page 54.)

The following extract from Dr. Bridgman's "Chinese Christomathy page 388," explains more fully the Chinese cyclical system—and measures of time. It will be observed the names of the years correspond with those used by the Siamese, who in fact copy the Chinese system.

HOROCLOGY, or the art of measuring time, early engaged the attention of the Chinese, who, like other nations, have devised various methods for marking its progress by distinct periods. The choice of these periods and their order of arrangement constitute what is called the *Calender*.

1. The celestial sovereign invented the ten stems, *viz.*, *káp, üt, ping, ting, mò, kí, kang, san, yam,* and *kwai*: and the twelve branches, *viz.*, *tsz', ch'au, yan, mau, shan, tsz', 'ng, mí, shan, yau, sut,* and *hoi*. Afterwards, Náu the Great, taking the first of the stems and branches, joined them together in pairs, and formed a cyclic nomenclature for the years, months, and days; and by drawing it in continuence downwards, it requires sixty years [to complete the series of changes,] after which the process is recommenced and repeated. Thus, for example, are joined *káptsz', ütch'au,* and so forth; by degrees the progression is carried on through the whole series of the stems and branches; and accordingly it is called, *The cycle of sixty*.

*Notes.*—1. According to tradition, *Tài Náu* was one of the ministers of *Wóng tai*, and flourished 2637 years B. C., at which time, by the commands of his sovereign, he formed the cycle of sixty, which was immediately adopted; accordingly, 1840 is the 37th year of the 75th cycle. The twelve characters used to designate the *chí*, or branches, have certain animals appropriated to them, by which they are frequently alluded to in poetical and other writings; the ten *kón*, or stems, have certain inanimate things appropriated to them in like manner. Thus, the twelve *chí*:—

<i>tsz'</i>	is represented by <i>shü</i> ,	a rat;	<i>'ng</i>	is represented by <i>mà</i> ,	a horse;
<i>ch'au</i>	" "	<i>ngau</i> ,	a cow;	<i>mí</i>	" "
<i>yan</i>	" "	<i>tú</i> ,	a tiger;	<i>shan</i>	" "
<i>mau</i>	" "	<i>t'ó</i> ,	a rabbit;	<i>yau</i>	" "
<i>shan</i>	" "	<i>lung</i> ,	a dragon;	<i>sut</i>	" "
<i>tsz'</i>	" "	<i>she</i> ,	a snake;	<i>koi</i>	" "
				<i>chü</i> ,	a boar;

The ten *kón* are connected with the five elements, according to the cosmogony of the Chinese; *káp* and *üt* are allied to wood, which is figured as the *yam* and *yéung* wood, or a fir and a bamboo; *ping* and *ting* are allied to fire, divided in the same manner into coal-fire and incense-fire; *mò kí* to earth, as hills and plains; *kang* and *san* to metal; and *yam* and *kwai* to water; each of which produces its successor, and destroys its predecessor. N. B. In order to distinguish *mò, sut,* and *shü* (another similar character), the Chinese use the following verse: *Wáng sut, tím shü, mò chung hung*; i. e. cross *sut*, point *shü*, and leave open the middle of *mò*.

2. The tropical year is divided into *four seasons*, called Spring, Summer, Autumn, and Winter; the first, second, and third months make the spring season; the fourth, fifth, and six months make the summer season; the seventh, eighth, and ninth months make the autumnal season; the tenth, the eleventh, and twelfth, make the winter season.

3. *Twelve months* make one year; in five years there are two *intercalary months*. Sometimes thirty days make one month; and sometimes twenty-nine days make one month.

4. Ten days make a *decade*, of which in a month there are three, the first, middle, and last decades.

5. A year is divided into *twenty-four terms*: the spring season consists of—opening-spring, rain-water, excited-insects, vernal-equinox, pure-brightness, grain-rains; six terms. The summer season consists of—opening-summer, [ears of grain] little-filled, spiked-grain, summer-solstice, little-heat, and great-heat; six terms. The autumnal seasons consists of—opening-autumn, abated-heat, white-dew, autumnal-equinox, cold-dew, descending-hoar-frost; six terms. The winter season consists of—opening-winter, little-snow, great snow, winter-solstice, little-cold, great-cold; six terms.

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*Notes.*—2. In the Trimetrical Classic there is a commentary on the four seasons, intended to illustrate their order, and the mode in which, by the alternation of cold and heat, &c., they operate for the production of trees and vegetables of all kinds. See Chap. 1., sec. 2., No. 29. The interval of time employed by the sun between two successive returns to one and the same point in the ecliptic makes a complete year, usually called the *tropical year*. Its duration has always been a subject of interest. The true mean year, as given by the last tables of M. Delambre, is 365d. 5h. 48' 51".61.

3. The Chinese year, which is *luni-solar*, consists of 12 months, except when, by this mode of reckoning, the lunar time falls behind the solar time one whole revolution of the moon; then an intercalary month is added, by the following rule; if, during any *lunar* month, the sun does not enter any sign of the zodiac, that month is intercalary, and the year consequently contains thirteen months. The intercalary year contains 384 days, and the common year 354 days; the 1st, 3d, 4th, 8th, and 12th months have 29th days. The month of 30 days is called *tai ut*, that of 29, is called *siu ut*; the greater and the lesser months.

5. These twelve terms express the periods of the sun's passage through the 12 signs of the zodiac; in their meaning there is a reference to the season of the year. The terms are applied to the day that the sun is in the first and fifteenth degrees of a sign of the zodiac; consequently in reckoning by the lunar years, their places in the calendar will change every year, but in the solar year of Europeans, they will fall more uniformly upon the same day, in successive years. When an intercalary month occurs, the terms continue to be reckoned as usual, an arrangement that sometimes brings the first term into the twelfth moon, making 25 terms in a year, but most usually it falls in the first month. Some of the terms are sixteen days in length, and some are fourteen, but the average is fifteen.

6. Every and each period of a day and night together includes ninety-six quarters, which are arranged into twelve periods of time, marked by the twelve branches; one period includes eight quarters, each of which consists of fifteen minutes; half a period makes one hour, or sixty minutes. Thus, in the day time, eleven o'clock, according to the common mode of speaking, is called *kàn'ng*; half-past two o'clock, in like manner, is called *mi ching t huk*.

7. The brazen *clepsydra* is formed of six water-pots, arranged in successive order one above another, and from which through small perforations the water gradually drops. The extreme lower vessel, which receives the water, has a wooden cover, and through it a hole is cut; and into it an index, marked with periods of time, is inserted. Then as the water in the vessel fills one degree, the index, floating on its surface, rises one quarter. The periods of time, and the watches, are all indicated by this means.

8. Also there are *incense sticks* which are employed to indicate periods of time; being lighted, the true time is indicated by the progress of the fire.

9. The *sun-dial* was devised for the purpose of observing the time, by the progress of the sun; a line is stretched due south so that the rays of the sun will fall on it; by the shadow of this line the true time of the day is indicated.

10. The whole night is divided into five *watches*, and commencing at 7 P. M. are announced as follows; *Káu sut* is announced as the opening watch, the first watch;

*Káu hoi* is announced as the second watch;

*Káu tsz'* is announced as the third watch;

*Káu ch'au* is announced as the fourth watch;

*Káu yan* is announced as the fifth watch;

The methods of announcing the watches are various: sometimes they are announced by the gong; sometimes by the drum, and afterwards by the gong, in concert. In villages, and in streets and market-places, hollow bamboos and sticks are chiefly used for announcing the watches.

*Notes*—6. *Hak* is a section, a notch, a small division of time; as it corresponds in duration with the fourth part of an hour, it may be rendered *quarter*. The day among the Chinese commences at eleven o'clock P. M. according to European reckoning. The hours are designated by the 12 *ch'í*, which from this use have been sometimes translated horary characters.

7. *Clepsydras* are still in use; they have varied in their construction at different periods. The water-pots seem originally to have been made of brass, and the term *t'ung* is still retained, although wood only is used. In the city of Canton, there is a building called *kung pak lau*, "bowing northward left;" it serves partly as an observatory, and partly as a watch-house, and is maintained by the government.

10. *Káu sut* is the time when the watch is set or commences, and is best as the first watch till *káu hoi*, on the opening of the second; and so of the others till 5 o'clock A. M., when the watch breaks up with a reveille, which the Chinese call *sánlui*.



## TABLES FOR FINDING MAHOMEDAN DATES.

The succeeding Tables are given for the purpose of enabling one to calculate the Mahomedan dates; that is, to find the English date corresponding to a Mahomedan date, and *vice versa*.

The date of the Mahomedan New Year, 1st of Mohurrum, is seen at a glance in the 1st, 2nd and 3rd columns of the Table No. 1. Thus:

On what day did the 1st of Mohurrum 1270 A. H., fall?—On the 4th of October 1853, a Tuesday, as will be seen from a mere inspection of Table I., which gives the *preceding* day, because in the evening of that day, at sunset, the Mahomedan civil day in question already *commenced*; our Table containing those Christian dates, which include the *epoch* of the Mahomedan dates, *mainly* corresponding to the *succeeding* Christian dates. It is only to remind the reader of this circumstance, that the present example has been adduced.

To find the corresponding dates for days during the year, recourse must be had to 4th and 5th column of Table No. 1—and to Tables No. II. and No. III. The 4th and 5th columns of the Table No. I. contain the ordinal numbers marking the position of the Mahomedan New Year in the Christian year; and the number of the FERIA or Week-day, Sunday being numbered I. and Saturday VII. Table No. II. contains the ordinal numbers corresponding to each of the several months in the Christian year, *a* in a common year, *b* in a leap year.

Table No. III. contains, firstly, the ordinal numbers corresponding to each of the several months of the Mahomedan year, whether a common or a leap year, and, secondly, the ordinal number of the FERIA or week-day answering to each day of the year, on the supposition of the 1st of Mohurrum being a Sunday or FERIA I.

By means of these tables the reduction of dates from one to the other may be effected: for example.

The treaty of Pruth was signed on the 6th Jumadialakir, A. H. 1123 what date, in the Christian Calendar, did this correspond to?

Table 1. A. H. 1123 is equal to A. C. 1711  
Ordinal number, 4th column, 49  
FERIA, 5th column, IV.

In table III. the ordinal number of 6th Jumadialakir is 154—and the FERIA, VII. then add the 2 ordinals and 2 FERIAS together, thus:

49—IV.  
154—VII.

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203 IV. 1 week and 4 days

and turn to table III. where the number 203 represents the 22nd of July. We have thus the date required. Wednesday 22nd July A.C. 1711.

Again: on what Christian date did the 3rd Safar A. H. 1260 fall?

Table I. A. C. 1844 21—I.  
Table III. 33—V.

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Table II. 54 VI.  
Friday 23rd of February A. C. 1844.

Again, what Christian date corresponds to 10th Dulkaida, A. H. 1235.

Table I. A. C. 1819                      292 — III.

Table III.                                      305 — IV.

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597 VII.

Take off 1 year                      365

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Table II.                                      232

Saturday 20th August, A. C. 1820—adding 1 year to 1819.

The reduction of a given Christian date to the Mahomedan kalendar is effected by a similar process. It consists simply in this:—1st to find the Christian date answering to the 1st Mohurram, which immediately precedes the given date; 2nd, the number of days intervening between both these Christian dates; and 3rd, the day of the Mahomedan month, corresponding to the number thus obtained, in the Mahomedan year.

I. If the given day of the month is *posterior* to the date of the corresponding 1st Mohurram, we take, in Table I., the year of the Hegira answering to the Christian year, with the corresponding days of the year. We then take in Table II., the day of the year answering to the given day of the month. Lastly, we subtract the days of the year, thus found, the former from the latter; and the remainder will indicate, by Table III., the day of the Mahomedan month; which, combined with the year of the Hegira previously obtained, answers to the given Christian date.

I. Example. What is the Mahomedan date corresponding to 8th May 1810?

Table II. common year.. 128

Table I. A. C. 1810 } .. 36  
A. H. 1225 }

1st Mohurram, 5th February, anterior to our date. 164

Table III. 164 is the 16th of Jumadialakir, and the year A. H. 1225.

II. If the given day of the month is *anterior* to the date of the corresponding 1st Mohurram, we take, in Table I., the year of the Hegira answering to the Christian year immediately preceding the given one, with the corresponding days of the year. We then subtract the latter from 365 to get the remaining days of the year, which we *add* to the days of the year corresponding to the given day of the month, and the number thus obtained indicates, by Table III., the day of the Mahomedan month.

II. Example—what is the Mahomedan date corresponding to 15th May A. C. 1820.

From Table I. we find our date to be *anterior* to the first of Mohurram in that year A. H. 1236, 8th Oct., our day therefore is in the previous Mahomedan year A. H. 1235. The ordinal number of this year A. C. 1819, 4th column Table I. is 292.

Now compute the interval between the 292nd day of the year 1819; and the 15th May 1820, according to Table II. the 136th day (leap year), which is done by simple subtraction

$$365 - 292 = 73$$

Add the ordinal number for 15th May (leap year) in Table II. 136

The 209th day of the Mahomedan year, according to Table III., is the 2nd of Shaban, and the year, by Table I. is A. H. 1235.

The day of the week is readily found: note the Feria of the Christian day of the year corresponding to 1st Mohurrum in question: divide the interval, in days, between that and the given Christian date by 7, and add the remainder to the Feria first obtained.

As in the above examples.

15th May 1820. The 1st Mohurrum was 19th October 1819.

The 202nd day of the year by Table II. and 3rd Feria by Table I. and the interval between this day and the given day, 15th May 1820, was 209 days (see above) which divided by 7 leaves a remainder of 6 and this number added to Feria III, being the week day of 18th October 1819, gives Feria II. a Monday, as the week day of 15th May 1820, and 1st of Rejab 1235.

In the second case, 8th of May 1810, the calculation will stand thus:—

Table I. 1810 A.C. 5th Feby. 36. II.

Table II 8th May 128.

$$\begin{array}{r} 7 \overline{) 164.} \\ 23. \text{ III.} \end{array}$$

V.

Shews 8th May 1810, 18 Ramzan 1225, to have been a Thursday.



TABLE I.

Years of Hegira.	Years of Christ.	Year of Hegira begins 1st Muharram.		Years of Hegira.	Years of Christ.	Year of Hegira begins 1st Muharram.	
		Gregorian Date.	Day of the Year Week			Gregorian Date.	Day of the Year Week
*1112	1700	17 June	168 v.	1151	1738	20 April	110 i.
1113	1701	7 June	158 III.	1152	1739	9 April	99 v.
1114	1702	27 May	147 VII.	*1153	*1740	28 Mar.	88 II.
*1115	1703	16 May	136 IV.	1154	1741	18 Mar.	77 VII.
1116	*1704	5 May	126 II.	1155	1742	7 Mar.	66 IV.
*1117	1705	24 April	114 VI.	*1156	*1743	24 Feb.	55 I.
1118	1706	14 April	104 IV.	1157	*1744	14 Feb.	45 VI.
1119	1707	3 April	93 I.	*1158	1745	2 Feb.	33 III.
*1120	*1708	22 Mar.	81 v.	1159	1746	23 Jan.	23 I.
				1160	1747	12 Jan.	12 v.
1121	1709	12 Mar.	71 III.	*1161	*1748	1 Jan.	1 II.
1122	1710	1 Mar.	60 VII.	1162	*1748	21 Dec.	356 VII.
*1123	1711	18 Feb.	49 IV.	1163	1749	10 Dec.	344 IV.
1124	*1712	8 Feb.	39 II.	*1164	*1750	29 Nov.	333 I.
1125	1713	27 Jan.	27 VI.	1165	1751	19 Nov.	323 VI.
*1126	1714	16 Jan.	16 III.	*1166	*1752	7 Nov.	312 III.
1127	1714	6 Jan.	6 I.	1167	1753	28 Oct.	301 I.
*1128	1715	26 Dec.	360 v.	1168	1754	17 Oct.	290 v.
1129	*1716	15 Dec.	349 III.	*1169	*1755	6 Oct.	279 II.
1130	1717	4 Dec.	338 VII.	1170	*1756	25 Sept.	269 VII.
				1171	1757	14 Sept.	257 IV.
*1131	1718	23 Nov.	327 IV.	*1172	1758	3 Sept.	246 I.
1132	1719	13 Nov.	317 II.	1173	1759	24 Aug.	236 VI.
1133	*1720	1 Nov.	306 VI.	1174	*1760	12 Aug.	225 III.
*1134	1721	21 Oct.	294 III.	*1175	1761	1 Aug.	213 VII.
1135	1722	11 Oct.	284 I.	1176	1762	22 July	203 v.
*1136	1723	30 Sept.	273 v.	*1177	*1763	11 July	192 II.
1137	*1724	19 Sept.	263 III.	1178	*1764	30 June	182 VII.
1138	1725	8 Sept.	251 VII.	1179	1765	19 June	170 IV.
*1139	1726	28 Aug.	240 IV.	*1180	1766	8 June	159 I.
1140	1727	18 Aug.	230 II.				
				1181	1767	26 May	149 VI.
1141	*1728	6 Aug.	219 VI.	1182	*1768	7 May	138 III.
*1142	1729	26 July	207 III.	*1183	*1769	26 May	126 VII.
1143	1730	16 July	197 I.	1184	1770	16 April	116 v.
1144	1731	5 July	186 v.	1185	1771	5 April	105 II.
*1145	*1732	23 June	175 II.	*1186	*1772	23 April	94 VI.
1146	1733	13 June	164 VII.	1187	1773	14 Mar.	83 IV.
*1147	1734	2 June	153 IV.	*1188	*1774	13 Mar.	72 I.
1148	1735	23 May	143 II.	1189	1775	3 Mar.	62 VI.
1149	*1736	11 May	132 VI.	*1190	*1776	20 Feb.	51 III.
*1150	1737	30 April	120 III.				

TABLE I.

Years of Hegira.	Years of Christ.	Year of Hegira begins 1st Muharram.			Years of Hegira.	Years of Christ.	Year of Hegira begins 1st Muharram.		
		G. Date.	Day Year	of the Week			G. Date.	Day of the Year	Week
*1191	1777	8 Feb.	39	VII.	1231	1815	3 Dec.	337	VII.
1192	1778	29 Jan.	29	V.	*1232	*1816	20 Nov.	325	IV.
1193	1779	18 Jan.	18	II.	1233	1817	10 Nov.	314	II.
*1194	*1780	7 Jan.	7	VI.	1234	1818	30 Oct.	303	VI.
1195	*1780	27 Dec.	362	IV.	*1235	*1819	19 Oct.	292	III.
*1196	1781	16 Dec.	350	I.	1236	*1820	8 Oct.	282	I.
1197	1782	6 Dec.	340	VI.	*1237	1821	27 Sept.	270	V.
1198	1783	25 Nov.	329	III.	1238	1822	17 Sept.	260	III.
*1199	*1784	13 Nov.	318	VII.	1239	1823	6 Sept.	249	VII.
1200	1785	3 Nov.	307	V.	*1240	*1824	25 Aug.	238	IV.
1201	1786	23 Oct.	296	II.	1241	1825	15 Aug.	227	II.
*1202	1787	12 Oct.	285	VI.	1242	1826	4 Aug.	216	VI.
1203	*1788	1 Oct.	275	IV.	*1243	1827	24 July	205	III.
1204	1789	20 Sept.	263	I.	1244	*1828	13 July	195	I.
*1205	1790	9 Sept.	252	V.	1245	1829	2 July	183	V.
1206	1791	30 Aug.	242	III.	*1246	1830	21 June	172	II.
*1207	*1792	18 Aug.	231	VII.	1247	1831	11 June	162	VII.
1208	1793	8 Aug.	220	V.	*1248	*1832	30 May	151	IV.
1209	1794	28 July	209	II.	1249	1833	20 May	140	II.
*1210	1795	17 July	198	VI.	1250	1834	9 May	129	VI.
1211	*1796	6 July	188	IV.	*1251	1835	28 April	118	III.
1212	1797	25 June	176	I.	1252	*1836	17 April	108	I.
*1213	1798	14 June	165	V.	1253	1837	6 April	96	V.
1214	1799	4 June	155	III.	*1254	1838	26 Mar.	85	II.
1215	1800	24 May	144	VII.	1255	1839	16 Mar.	75	VII.
*1216	1801	13 May	133	IV.	*1256	*1840	4 Mar.	64	IV.
1217	1802	3 May	123	II.	1257	1841	22 Feb.	53	II.
*1218	*1803	22 April	112	VI.	1258	1842	11 Feb.	42	VI.
1219	1804	11 April	102	IV.	*1259	1843	31 Jan.	31	III.
1220	1805	31 Mar.	90	I.	1260	*1844	21 Jan.	21	I.
*1221	1806	20 Mar.	79	V.	1261	1845	9 Jan.	9	V.
1222	1807	10 Mar.	69	III.	*1262	1845	29 Dec.	363	II.
1223	*1808	27 Feb.	58	VII.	1263	1846	19 Dec.	353	VII.
*1224	1809	15 Feb.	46	IV.	1264	1847	8 Dec.	342	IV.
1225	1810	5 Feb.	36	II.	*1265	*1848	26 Nov.	331	I.
*1226	1811	25 Jan.	25	VI.	1266	1849	16 Nov.	320	VI.
1227	*1812	15 Jan.	15	IV.	*1267	1850	5 Nov.	309	III.
1228	1813	3 Jan.	3	I.	1268	1851	26 Oct.	299	I.
*1229	1813	23 Dec.	358	V.	1269	*1852	14 Oct.	288	V.
1230	1814	13 Dec.	347	III.	*1270	1853	3 Oct.	276	II.

TABLE I.

Years of Hegira	Years of Christ.	Year of Hegira begins 1st Muharram.		Years of Hegira	Years of Christ.	Year of Hegira begins 1st Muharram.	
		G. Date.	Day of the Year Week			G. Date.	Day of the Year Week
1271	1854	23 Sept.	266 VII.	1291	1874	17 Feb.	48 III.
1272	1855	12 Sept.	255 IV.	*1292	1875	6 Feb.	37 VII.
*1273	*1856	31 Aug.	244 I.	1293	*1876	27 Jan.	27 V.
1274	1857	21 Aug.	233 VI.	1294	1877	15 Jan.	15 II.
1275	1858	10 Aug.	222 III.	*1295	1878	4 Jan.	4 VI.
*1276	*1859	30 July.	111 VII.	1296	1878	25 Dec.	359 IV.
1277	*1860	19 July.	101 V.	*1297	1879	14 Dec.	348 I.
*1278	*1861	8 July.	189 II.	1298	*1880	3 Dec.	338 VI.
1279	1862	28 June	179 VII.	1299	1881	22 Nov.	326 III.
1280	1863	17 June	168 IV.	*1300	1882	11 Nov.	315 VII.
				1301	1883	1 Nov.	305 V.
*1281	*1864	5 June	157 I.	1302	*1884	20 Oct.	294 II.
1282	1865	26 May	146 VI.	*1303	1885	9 Oct.	282 VI.
1283	1866	15 May	135 III.	1304	1886	29 Sept.	272 IV.
*1284	*1867	4 May	124 VII.	1305	1887	18 Sept.	261 I.
1285	1868	23 April	114 V.	*1306	*1888	6 Sept.	250 V.
*1286	*1869	12 April	102 II.	1307	1889	27 Aug.	239 III.
1287	1870	2 April	92 VII.	*1308	1890	16 Aug.	228 VII.
1288	1871	22 Mar.	81 IV.	1309	1891	6 Aug.	218 V.
1289	1872	10 Mar.	70 I.	1310	*1892	25 July.	207 II.
1290	1873	28 Feb.	59 VI.				

The years marked \* are leap years.

TABLE II.

JANUARY.			FEBRUARY.			MARCH.			APRIL.		
Year.		Day of the Year.	Year.		Day of the Year.	Year.		Day of the Year.	Year.		Day of the Year.
Common.	Leap.		Common.	Leap.		Common.	Leap.		Common.	Leap.	
1	1	1	1	1	32	1		60	1		91
2	2	2	2	2	33	2	1	61	2	1	92
3	3	3	3	3	34	3	2	62	3	2	93
4	4	4	4	4	35	4	3	63	4	3	94
5	5	5	5	5	36	5	4	64	5	4	95
6	6	6	6	6	37	6	5	65	6	5	96
7	7	7	7	7	38	7	6	66	7	6	97
8	8	8	8	8	39	8	7	67	8	7	98
9	9	9	9	9	40	9	8	68	9	8	99
10	10	10	10	10	41	10	9	69	10	9	100
11	11	11	11	11	42	11	10	70	11	10	101
12	12	12	12	12	43	12	11	71	12	11	102
13	13	13	13	13	44	13	12	72	13	12	103
14	14	14	14	14	45	14	13	73	14	13	104
15	15	15	15	15	46	15	14	74	15	14	105
16	16	16	16	16	47	16	15	75	16	15	106
17	17	17	17	17	48	17	16	76	17	16	107
18	18	18	18	18	49	18	17	77	18	17	108
19	19	19	19	19	50	19	18	78	19	18	109
20	20	20	20	20	51	20	19	79	20	19	110
21	21	21	21	21	52	21	20	80	21	20	111
22	22	22	22	22	53	22	21	81	22	21	112
23	23	23	23	23	54	23	22	82	23	22	113
24	24	24	24	24	55	24	23	83	24	23	114
25	25	25	25	25	56	25	24	84	25	24	115
26	26	26	26	26	57	26	25	85	26	25	116
27	27	27	27	27	58	27	26	86	27	26	117
28	28	28	28	28	59	28	27	87	28	27	118
29	29	29		29	60	29	28	88	29	28	119
30	30	30				30	29	89	30	29	120
31	31	31				31	30	90		30	121
							31	91			

TABLE II.

MAY.			JUNE.			JULY.			AUGUST.		
Year.		Day of the Year.	Year.		Day of the Year.	Year.		Day of the Year.	Year.		Day of the Year.
Common.	Leap.		Common.	Leap.		Common.	Leap.		Common.	Leap.	
1		121	1		152	1		182	1		213
2	1	122	2	1	153	2	1	183	2	1	214
3	2	123	3	2	154	3	2	184	3	2	215
4	3	124	4	3	155	4	3	185	4	3	216
5	4	125	5	4	156	5	4	186	5	4	217
6	5	126	6	5	157	6	5	187	6	5	218
7	6	127	7	6	158	7	6	188	7	6	219
8	7	128	8	7	159	8	7	189	8	7	220
9	8	129	9	8	160	9	8	190	9	8	221
10	9	130	10	9	161	10	9	191	10	9	222
11	10	131	11	10	162	11	10	192	11	10	223
12	11	132	12	11	163	12	11	193	12	11	224
13	12	133	13	12	164	13	12	194	13	12	225
14	13	134	14	13	165	14	13	195	14	13	226
15	14	135	15	14	166	15	14	196	15	14	227
16	15	136	16	15	167	16	15	197	16	15	228
17	16	137	17	16	168	17	16	198	17	16	229
18	17	138	18	17	169	18	17	199	18	17	230
19	18	139	19	18	170	19	18	200	19	18	231
20	19	140	20	19	171	20	19	201	20	19	232
21	20	141	21	20	172	21	20	202	21	20	233
22	21	142	22	21	173	22	21	203	22	21	234
23	22	143	23	22	174	23	22	204	23	22	235
24	23	144	24	23	175	24	23	205	24	23	236
25	24	145	25	24	176	25	24	206	25	24	237
26	25	146	26	25	177	26	25	207	26	25	238
27	26	147	27	26	178	27	26	208	27	26	239
28	27	148	28	27	179	28	27	209	28	27	240
29	28	159	29	28	180	29	28	210	29	28	241
30	29	150	30	29	181	30	29	211	30	29	242
31	30	151		30	182	31	30	212	31	30	243
	31	152					31	213		31	244

TABLE II.

SEPTEMBER.			OCTOBER.			NOVEMBER.			DECEMBER.		
Year.		Day of the Year.	Year.		Day of the Year.	Year.		Day of the Year.	Year.		Day of the Year.
Common.	Leap.		Common.	Leap.		Common.	Leap.		Common.	Leap.	
1		244	1		274	1		305	1		335
2	1	245	2	1	275	2	1	306	2	1	336
3	2	246	3	2	276	3	2	307	3	2	337
4	3	247	4	3	277	4	3	308	4	3	338
5	4	248	5	4	278	5	4	309	5	4	339
6	5	249	6	5	279	6	5	310	6	5	340
7	6	250	7	6	280	7	6	311	7	6	341
8	7	251	8	7	281	8	7	312	8	7	342
9	8	252	9	8	282	9	8	313	9	8	343
10	9	253	10	9	283	10	9	314	10	9	344
11	10	254	11	10	284	11	0	315	11	10	345
12	11	255	12	11	285	12	1	316	12	11	346
13	12	256	13	12	286	13	2	317	13	12	347
14	13	257	14	13	287	14	3	318	14	13	348
15	14	258	15	14	288	15	4	319	15	14	349
16	15	259	16	15	289	16	5	320	16	15	350
17	16	260	17	16	290	17	6	321	17	16	351
18	17	261	18	17	291	18	7	322	18	17	352
19	18	262	19	18	292	19	8	323	19	18	353
20	19	263	20	19	293	20	9	324	20	19	354
21	20	264	21	20	294	21	20	325	21	20	355
22	21	265	22	21	295	22	21	326	22	21	356
23	22	266	23	22	296	23	22	327	23	22	357
24	23	267	24	23	297	24	23	328	24	23	358
25	24	268	25	24	298	25	24	329	25	24	359
26	25	269	26	25	299	26	25	330	26	25	360
27	26	270	27	26	300	27	26	331	27	26	361
28	27	271	28	27	301	28	27	332	28	27	362
29	28	272	29	28	302	29	28	333	29	28	363
30	29	273	30	29	303	30	29	334	30	29	364
	30	274	31	30	304		30	335	31	30	365
			31	31	305					31	366

TABLE III.

MUHARRAM.			SAFAR.			RABI' I.			RABI' II.		
Day of the			Day of the			Day of the			Day of the		
Month.	Year.	Week.	Month.	Year.	Week.	Month.	Year.	Week.	Month.	Year.	Week.
1	1 I.		1	31 III.		1	60 IV.		1	90 VI.	
2	2 II.		2	32 IV.		2	61 V.		2	91 VII.	
3	3 III.		3	33 V.		3	62 VI.		3	92 I.	
4	4 IV.		4	34 VI.		4	63 VII.		4	93 II.	
5	5 V.		5	35 VII.		5	64 I.		5	94 III.	
6	6 VI.		6	36 I.		6	65 II.		6	95 IV.	
7	7 VII.		7	37 II.		7	66 III.		7	96 V.	
8	8 I.		8	38 III.		8	67 IV.		8	97 VI.	
9	9 II.		9	39 IV.		9	68 V.		9	98 VII.	
10	10 III.		10	40 V.		10	69 VI.		10	99 I.	
11	11 IV.		11	41 VI.		11	70 VII.		11	100 II.	
12	12 V.		12	42 VII.		12	71 I.		12	101 III.	
13	13 VI.		13	43 I.		13	72 II.		13	102 IV.	
14	14 VII.		14	44 II.		14	73 III.		14	103 V.	
15	15 I.		15	45 III.		15	74 IV.		15	104 VI.	
16	16 II.		16	46 IV.		16	75 V.		16	105 VII.	
17	17 III.		17	47 V.		17	76 VI.		17	106 I.	
18	18 IV.		18	48 VI.		18	77 VII.		18	107 II.	
19	19 V.		19	49 VII.		19	78 I.		19	108 III.	
20	20 VI.		20	50 I.		20	79 II.		20	109 IV.	
21	21 VII.		21	51 II.		21	80 III.		21	110 V.	
22	22 I.		22	52 III.		22	81 IV.		22	111 VI.	
23	23 II.		23	53 IV.		23	82 V.		23	112 VII.	
24	24 III.		24	54 V.		24	83 VI.		24	113 I.	
25	25 IV.		25	55 VI.		25	84 VII.		25	114 II.	
26	26 V.		26	56 VII.		26	85 I.		26	115 III.	
27	27 VI.		27	57 I.		27	86 II.		27	116 IV.	
28	28 VII.		28	58 II.		28	87 III.		28	117 V.	
29	29 I.		29	59 III.		29	88 IV.		29	118 VI.	
30	30 II.					30	89 V.				

TABLE III.

JUMADIAL-AWAL.			JUMADIAL-AKIR.			REJAB.			SHABAN.		
Day of the			Day of the			Day of the			Day of the		
Month.	Year.	Week.	Month.	Year.	Week.	Month.	Year.	Week.	Month.	Year.	Week.
1	119	VII.	1	149	II.	1	178	III.	1	208	V.
2	120	I.	2	150	III.	2	179	IV.	2	209	VI.
3	121	II.	3	151	IV.	3	180	V.	3	210	VII.
4	122	III.	4	152	V.	4	181	VI.	4	211	I.
5	123	IV.	5	153	VI.	5	182	VII.	5	212	II.
6	124	V.	6	154	VII.	6	183	I.	6	213	III.
7	125	VI.	7	155	I.	7	184	II.	7	214	IV.
8	126	VII.	8	156	II.	8	185	III.	8	215	V.
9	127	I.	9	157	III.	9	186	IV.	9	216	VI.
10	128	II.	10	158	IV.	10	187	V.	10	217	VII.
11	129	III.	11	159	V.	11	188	VI.	11	218	I.
12	130	IV.	12	160	VI.	12	189	VII.	12	219	II.
13	131	V.	13	161	VII.	13	190	I.	13	220	III.
14	132	VI.	14	162	I.	14	191	II.	14	221	IV.
15	133	VII.	15	163	II.	15	192	III.	15	222	V.
16	134	I.	16	164	III.	16	193	IV.	16	223	VI.
17	135	II.	17	165	IV.	17	194	V.	17	224	VII.
18	136	III.	18	166	V.	18	195	VI.	18	225	I.
19	137	IV.	19	167	VI.	19	196	VII.	19	226	II.
20	138	V.	20	168	VII.	20	197	I.	20	227	III.
21	139	VI.	21	169	I.	21	198	II.	21	228	IV.
22	140	VII.	22	170	II.	22	199	III.	22	229	V.
23	141	I.	23	171	III.	23	200	IV.	23	230	VI.
24	142	II.	24	172	IV.	24	201	V.	24	231	VII.
25	143	III.	25	173	V.	25	202	VI.	25	232	I.
26	144	IV.	26	174	VI.	26	203	VII.	26	233	II.
27	145	V.	27	175	VII.	27	204	I.	27	234	III.
28	146	VI.	28	176	I.	28	205	II.	28	235	IV.
29	147	VII.	29	177	II.	29	206	III.	29	236	V.
30	148	I.				30	207	IV.	29		



TABLE III.

RAMAZA'N.			SHAWA'L.			DULKHAIDA			DULHAJEE		
Day of the			Day of the			Day of the			Day of the		
Month.	Year.	Week.	Month.	Year.	Week.	Month.	Year.	Week.	Month.	Year.	Week.
1	237 VI.		1	267 I.		1	296 II.		1	326 IV.	
2	238 VII.		2	268 II.		2	297 III.		2	327 V.	
3	239 I.		3	269 III.		3	298 IV.		3	328 VI.	
4	240 II.		4	270 IV.		4	299 V.		4	329 VII.	
5	241 III.		5	271 V.		5	300 VI.		5	330 I.	
6	242 IV.		6	272 VI.		6	301 VII.		6	331 II.	
7	243 V.		7	273 VII.		7	302 I.		7	332 III.	
8	244 VI.		8	274 I.		8	303 II.		8	333 IV.	
9	245 VII.		9	275 II.		9	304 III.		9	334 V.	
10	246 I.		10	276 III.		10	305 IV.		10	335 VI.	
11	247 II.		11	277 IV.		11	306 V.		11	336 VII.	
12	248 III.		12	278 V.		12	307 VI.		12	337 I.	
13	249 IV.		13	279 VI.		13	308 VII.		13	338 II.	
14	250 V.		14	280 VII.		14	309 I.		14	339 III.	
15	251 VI.		15	281 I.		15	310 II.		15	340 IV.	
16	252 VII.		16	282 II.		16	311 III.		16	341 V.	
17	253 I.		17	283 III.		17	312 IV.		17	342 VI.	
18	254 II.		18	284 IV.		18	313 V.		18	343 VII.	
19	255 III.		19	285 V.		19	314 VI.		19	344 I.	
20	256 IV.		20	286 VI.		20	315 VII.		20	345 II.	
21	257 V.		21	287 VII.		21	316 I.		21	346 III.	
22	258 VI.		22	288 I.		22	317 II.		22	347 IV.	
23	259 VII.		23	289 II.		23	318 III.		23	348 V.	
24	260 I.		24	290 III.		24	319 IV.		24	349 VI.	
25	261 II.		25	291 IV.		25	320 V.		25	350 VII.	
26	262 III.		26	292 V.		26	321 VI.		26	351 I.	
27	263 IV.		27	293 VI.		27	322 VII.		27	352 II.	
28	264 V.		28	294 VII.		28	323 I.		28	353 III.	
29	265 VI.		29	295 I.		29	324 II.		29	354 IV.	
30	266 VII.					30	325 III.		* 30	355 V.	

## JAPANESE CHRONOLOGY.

Translation of an extract from an article on Japan in the "Revue des Deux Mondes" 15th May 1861 page 400, on the subject of Japanese chronology. "The Japanese have many modes of country time. They use the era of Sin-mon, the first Micado 680 B. C. They also use the Imperial eras named *Nengo*. The 32nd Micado conceived the idea of attaching certain epithets to the year commencing his reign, "*the celestial peace*" "*the eternal virtue*" his successors followed his example and these phrases serve to design the epoch. Thus the treaty of Baron Gros was signed on the 3rd day of the 9th moon of the 5th year of *Nengo Anchei*, "the year of the horse" (9th October 1858). As to the 60 years cycle equally employed in China and Siam, it dates from the year 2637 B. C. (consequently Sin-mon belonged to the 33rd cycle) since that time there have been 75 cycles, and the 76th will commence A. C. 1864 to end in A. C. 1923. Each year of the cycle has a name peculiar to itself."

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## MAHOMEDAN TIMES OF PRAYER.

- |                   |    |  |
|-------------------|----|--|
| 1. Suboh or Soobh | .. | Day break.   |
| 2. Lohoh or Doohr | .. | After mid-day near 1 p. m.                           |
| 3. Asr            | .. | Afternoon, about mid-way between noon and nightfall. |
| 4. Mugh'rib       | .. | Sunset, or rather a few minutes after sunset.        |
| 5. Eah'e          | .. | Evening, when it has just become dark.               |
- 

## CHINESE BOOK-KEEPING.

The Chinese keep four books: 1st the Ohoh Cheng, the waste (literally, the gross) book; 2nd the Jit Cheng, or day book; 3rd the Chong Poh, or ledger, of which they keep two, if their transactions are extensive, one for Chinese, and one for other persons, Orientals or Europeans; and 4th the Hoay Cheng, or stock book. This last is not always kept. The Jit Cheng serves as a cash as well as a day book. All purchases of goods for cash are entered in words at length; on credit, in figures. The former is called tuah beh, or tuah poon seah; the latter seoh beh, or seoh poon seah. The Chinese keep no regular books for entering receipts of goods. A Hoon Pai (white painted board) is kept by some for this purpose.

## FEES PAYABLE IN PUBLIC OFFICES &amp;c.

## SUPREME COURT.

A TABLE of FEES authorized to be received and taken by the Officers of the Court of Judicature of Prince of Wales' Island, Singapore and Malacca ; pursuant to the Provision of His Majesty's Charter :—Settled this 4th day of October 1827.

	<i>Sp. Dollars</i>
For filing Petition, where the amount claimed shall not exceed 100 dollars .. .. .	1
And 1 per cent on all sums above 100 dollars. ..	3 —
For filing same, where it shall have been put into writing by the Recorder from a verbal statement, or where, having been preferred in writing, it shall have been perused and settled by the Recorder, or where it shall have been re-drawn by the Recorder, per cent ..	1 —
For filing petition for leave to appeal, per cent ..	1 —
For entering all petitions .. .. .	1 —
In all ejectments, and in all actions or proceedings where the thing sought to be recovered shall consist of lands or houses, or both, the charge on filing petition shall be 1 per cent upon the valuation at which the same is assessed by Government.	
In all actions or proceedings brought for the specific recovery of a personal chattel, or for damage done thereto, or conversion of the same, the charge for filing petition shall be 1 per cent on the value of the chattel, and 1 per cent on the amount of damage laid in the petition	
For Summons to each defendant .. .. .	1 —
For Registrar's Certificate of petition being filed, and judge's order thereon for a <i>capias</i> .. .. .	1 —
For filing every Affidavit of debt, where the sum sworn to is under or amounts to 100 dollars .. .. .	1 —
If above 100 dollars, for every 100 dollars .. .. .	1 —
For <i>Capias</i> in pursuance, in every case .. .. .	2 —
For taking Special Bail, and entering same, each defendant in all cases .. .. .	1 —
For Justification of Bail before judge or commissioner, and drawing affidavit, each defendant .. .. .	1 —

	<i>Sp. Dollars.</i>
For Annexing every plea or answer, defence or demurrer to petition, each defendant .. ..	1 —
For Summons to each witness .. ..	1 —
For Calling every cause .. ..	— 50
For Entering same .. ..	— 50
For Administering every Oath in court or chambers ..	— 50
For Reading every exhibit, document or paper produced in evidence, unless the court or judge shall at the time direct a larger sum to be paid .. ..	— 50
For taking down the evidence of each witness in all appealable cases, as directed by the charter, per folio of 90 words, 7 figures to count for 1 word. .. ..	— 50
For every judgment or decree pronounced by the court or judge, where the amount recovered does not exceed 100 dollars. ....	1 —
And one per cent afterwards. ....	
For entering every judgment or decree .. ..	1 —
For taxing costs, including agent's charges, where the bill does not exceed 100 dollars. ....	1 —
After the first 100 dollars, 1 per cent. ....	
For all writs of execution .. ..	1 —
For every copy of declaration, or bill, petition, plea or answers, or any other document, paper or proceeding in court, not otherwise charged, in all matters, per folio .. ..	— 50
For registrar or clerk examining or attesting, and certifying same, in all matters .. ..	1 —
For every habeas corpus, mandamus, certiorari, or any other writ or process whatsoever, not otherwise charged .. ..	1 —
For every attachment for contempt in the presence of the court, or otherwise, or disobedience of order or rule of court .. ..	1 —
For all interrogatories and answers thereto filed in pursuance thereof, per folio of 90 words .. ..	— 50
For every commission to examine or swear witnesses, each witness .. ..	1 —
For every commission issuing from the court for the appointment of justices of the peace. .. ..	50 —
For each name to be inserted in such commission ..	10 —
For every proclamation made .. ..	— 50
For every search in the registrar's office .. ..	— 50
For every report or certificate by the registrar or other person, to whom any cause or matter shall have been referred by the court, for the 1st folio .. ..	1 —
For every folio after .. ..	— 50
For every rule or order of court .. ..	1 —
For every receipt granted by the registrar, when demanded .. ..	— 50
For every attendance before the registrar or other person to whom any cause or other matter shall have been referred by the court, each party per hour .. ..	2 —
For perusal by the registrar or other person appointed by	

	<i>Sp. Dollars.</i>
the court, of any deeds, conveyances or other documents, not exceeding 20 folios, of 90 words each, and settling and signing same. . . . .	5 —
If above 20 folios, for each folio additional . . . . .	— 50
For every attendance by the registrar or other person appointed by the court, within the limits of George Town, to administer oath or transact other business, exclusive of palanquin hire . . . . .	1 —
Beyond the bounds of George Town, exclusive of palanquin hire . . . . .	2 —

#### IN APPEALABLE MATTERS:

For filing every petition for leave to appeal, per cent . . . . .	1 —
For every certificate of appeal, allowed . . . . .	1 —

#### ECCLESIASTICAL MATTERS:

For receiving and filing petition for probate or letters of administration, swearing petitioner to the truth thereof, and filing bond, per cent . . . . .	1 —
But if it shall appear, upon any subsequent examination of the executor's or administrator's accounts by the court, that the sum realized exceeds the sum sworn to, the executor or administrator shall pay 1 per cent on the excess.	
For granting all letters of administration or probate . . . . .	
For every caveat filed . . . . .	5 —
For every certificate of the registrar of accounts and inventories being filed, and copies thereof, unless a smaller sum shall be specially ordered by the court, per folio of 90 words . . . . .	1 —
For every exemplification of a will, per folio of 90 words, and parchment . . . . .	1 —
For every petition for marriage license . . . . .	2 —
For license for celebrating marriage under seal of the court . . . . .	20 —

*B. Fullerton.*

*J. T. Claridge.*

#### *Added since the above was settled:*

For drawing every petition, per folio of 90 words . . . . .	1 —
For ditto . . . ditto, affidavit of . . ditto . . . . .	1 —
For ditto . . . ditto, for every other document, do . . . . .	1 —
For every notice to plead . . . . .	.. 50

#### CROWN FEES.

To be taken and received by the Registrar when the Court sits as a Court of Oyer and Terminer and Gaol Delivery.

For preparing every bench warrant, and every other process issuing out of the court of Oyer and Terminer . . . . .	2 —
For every venire, taking every recognizance, and dis-	

	<i>Sp. Dollars.</i>
charging or respiting the same (recording the appearance, plea or acquittal of every defendant), for every bail and justification of bail, and for every order of court and copy thereof, in case of felony .. ..	2 —
For the same, except in felony .. ..	1 —
For drawing and engrossing every bill of indictment in felony, per folio .. ..	1 —
For the same, except in felony .. ..	— 50
For copies of indictments, and other papers when ordered or required, per folio .. ..	— 50
For every subpoena .. ..	— 50
For every search in office .. ..	1 —
For entering petition of appeal, taking the security thereon, and entering the allowance of appeal, taking together, in felony .. ..	10 —
For the same, except in felony .. ..	5 —
For swearing each witness on indictment previous to going before the grand jury, in all cases .. ..	— 50
For calling and swearing the jury on trial .. ..	1 —
For entering and recording verdict .. ..	1 —
For reading every notice or other document exhibited in court as evidence .. ..	— 50
For every oath administered in court .. ..	— 50
For every prisoner discharged by proclamation or acquitted of felony .. ..	2 —
For the same, except in felony .. ..	1 —
For every prisoner convicted of felony .. ..	2 —
For the same, except in felony .. ..	1 —

#### QUARTER SESSION FEES.

**FEES** to be taken by the Registrar when the Court sits as a Court of Quarter Sessions.

When the court sits as a court of quarter sessions, and the like duties are performed by the registrar or his clerks as in a court of Oyer and Terminer and Gaol Delivery, he shall be authorized to charge the same fees.

When small offences, controversies, quarrels and misdemeanors are tried, the charges shall be as under, the fees to be paid by prosecutor before trial:

For entering every plaint and sentence of court, if only one defendant .. ..	2 —
If more than one defendant, for every individual charged .. ..	— 50

*R. Fullerton,*

Governor.

*John Thomas Claridge,*

Recorder, &c.

The following is the Governor's objection to fees on the criminal side, as entered and filed of record on the proceedings of the court on the 4th of October 1827 :—

Of fees on the criminal side in proceedings before the court of Oyer and Terminer, or quarter sessions, I entirely disapprove. If paid by individuals, the course of justice will probably be impeded by discouraging prosecutions. If paid by government, an uncertain and indefinite expense will be incurred ; nearly all criminal cases coming before the court, and sent by the sitting justices, being virtually public suits ; if necessary, we may recommend Government to allow a clerk of the crown to conduct them.

#### SHERIFF'S FEES.

	<i>Sp. Drs.</i>
For serving every summons, subpoena, citation or order	1 —
For serving every writ and other bailable process . .	2 —
For discharging every defendant at the desire of the plaintiff . . . . .	— 50
For releasing property seized under writ of sequestration or fieri facias, by the desire of the plaintiff . . . .	5 —
For drawing and taking each bail bond, every defendant	1 —
When any summons, writ or process of any kind shall be executed, or act done, for which a fee is authorized to be taken as above, the deputy duly appointed, who shall execute such process or do such act, shall be entitled to one half the fee or fees which the sheriff may claim under this table.	

#### *Poundage :*

Five per cent to be charged upon the first five hundred dollars, and two and a half per cent upon every one hundred dollars above five hundred dollars.

*R. Fullerton,*  
Governor.

*John Thomas Claridge,*  
Recorder.

\* \* A revised table of fees to be taken by the Agents and Advocates being under the consideration of the Court, the old table is not inserted

**THE TABLE OF FEES OF THE COURT FOR THE RELIEF OF  
INSOLVENT DEBTORS.**

<b>PRINCIPAL OFFICER'S FEES.</b>		<b>Drs.</b>	<b>Cts.</b>
For Filing Petition including entry of the same in the Record Book	..	—	50
„ Filing Schedule (or amended Schedule) with Estate Paper annexed and entering	..	—	50
„ Every other document which requires to be filed	..	—	25
„ Minuting in the Minute Book, every Rule and Proceeding and for every Copy thereof, each per folio of 90 words	..	—	15
„ The drawing and fair Copying of every Warrant to the Sheriff to bring up a Prisoner, or to discharge, release, or further imprison him, and of vesting, interim, and other orders, each per folio	..	—	15
„ Office Copies of all proceedings or Accounts per folio	..	—	15
„ Every Certificate	..	—	50
„ Every search in his Office in answer to Inquiry	..	—	50
„ Reading and marking every exhibit or other proceeding read in Court	..	—	20
„ Each Subpœna	..	—	50
„ Entering Notice of opposition	..	—	25
„ Entering a Case in the list of Cases for each day's hearing	..	—	25
„ Every Attendance before the Court of Judicature with Records, Books, or Papers, from his Office, on cases appealed or order	..	1	00
„ Every Attendance on the Court or a Judge in Chambers, with Papers from his Office, by Order of the Court, or a Judge or at the request of any party	..	—	75
„ Every Summons and every Precept, each	..	—	20
„ Investigating Accounts and other matters referred by the Court, and for reporting thereon to the Court, for each Meeting (such Meeting to last 3 hours if required)	..	4	00
„ Ditto when Documents only referred and reporting them	..	3	00
N. B.—This is the total whatever time may be occupied			
„ Preparing every Notice and Advertisement, including sending the same to the Gazette	..	—	25
„ Taking down every examination of an Insolvent, or deposition of a Witness per folio	..	—	15
„ Making a fair copy thereof to be filed in Court, (besides parchment) per folio	..	—	15
To any Commissioner for taking any Affidavit at the Gaol, including attendance and explanation	..	1	00
<b>THE TAXING OFFICER.</b>			
For taxing every bill of Costs under 100 dollars	..	1	00
above 100 dollars	..	2	00



For Every Summons	.. .. .	Drs.	ct.50
" Every Certificate	.. .. .	—	50
" Oath administered and Affidavit Sworn before him	.. .. .	—	25
" Every Office Copy when required per folio	.. .. .	—	15

### THE INTERPRETERS.

For Translations per folio	.. .. .	—	50
" Calling on each Petition to be heard	.. .. .	—	25
" Every oath administered to the Prisoner and the Witnesses, each	.. .. .	—	25

### SEALER.

For every Seal of the Court	.. .. .	—	50
" Every Seal to Certificates and other Papers sent to England	.. .. .	2	00

### UNDER SHERIFF AND MESSENGER.

For bringing up each Prisoner before the Court or a Judge, or before Examiner or referee on order	.. .. .	—	50
" Every Warrant to the Gaoler to discharge a defendant	.. .. .	—	25
" Filing all Warrants and Orders	.. .. .	—	25
" Every search in his Office	.. .. .	—	50
" Every Certificate	.. .. .	—	25
" Every Service by the Post	.. .. .	—	10
" Serving each Notice within 5 Miles of the respective Court-Houses at the different stations	.. .. .	—	20

### GAOLER.

For every Certificate	.. .. .	—	25
" Attending with a Prisoner before the Court or a Judge, or before any Officer to whom the Court shall refer any matter for investigation on order	.. .. .	—	50
" Forms to Prisoner, assistance in filling up, attestation, delivery &c. as in rule mentioned	.. .. .	7	00

### BROKER OR OTHER VALUER.

For valuing, appraising, and certifying the excepted articles if within five miles of the Court-Houses at the respective stations	.. .. .	3	00
" Every additional mile he shall traverse beyond that distance	.. .. .	—	50

### ATTORNEYS' FEES.

Attendance in Prison, taking instructions for Petition	.. .. .	3	00
Drawing and Engrossing Petition	.. .. .	1	00
Preparing and attesting Estate Papers, each	.. .. .	1	00
Ditto, if second page written additional	.. .. .	—	50
Attending to lodge or file Petition with accompanying documents	.. .. .	1	00
Attendances in Prison, taking instructions for Schedule	.. .. .	4	00

Drawing Schedule, per folio of 90 words .. ..	Drs.	30
When the number of Debtors exceed 20, then for the excess above 20, per folio, only 25 cents, viz. 2 words to be computed as one.		
Engrossing Schedule and Estate Papers, and duplicate thereof, per folio .. ..	—	15
Fair copy for Prisoner if required, per folio .. ..	—	15
General Balance Sheet, common case .. ..	2	00
Ditto, per additional sheet .. ..	1	00
Drawing and Engrossing Petition and Affidavit for leave to file Petition or Schedule (time being passed) on printed form common case .. ..	1	50
Drawing and Engrossing if another half sheet is necessary for the Debtor and Creditor account—additional .. ..	—	75
All attendances relating to any application to the Court ..	1	00
Attending at prison reading over and attesting Schedule and Estate Paper .. ..	2	00
Attending to file Schedule and for order for hearing ..	1	00
Attending Insolvent for his Books, &c. indorsing the same and lodging them at the Office .. ..	1	00
Drawing Advertisements, with fair copy for printer, and Attendance to insert the same .. ..	2	00
Copies of order to serve or annex and examining, including letters for service by the post, and attending at the Post Office to put in the same, each .. ..	—	15
Attending Messenger to deliver order, copies for Service and lists, and for their return .. ..	1	00
For all lists delivered to Messenger in each case .. ..	—	50
Ditto in respect of each Notice specified in such lists, additional .. ..	—	10
Searching with the Sheriff. for detainers .. ..	—	50
Searching for Notice of opposition .. ..	—	50
Attending Court on the hearing and advocating a case as Counsel .. ..	10	00
Attending for order of adjudication and delivering the same to the Insolvent .. ..	1	00
Drawing and Engrossing affidavits of service of rules per folio .. ..	—	15
Ditto other affidavits than above mentioned per folio ..	—	25
Taking instructions for special affidavits .. ..	1	—
Attending the Court on motion and other necessary attendance, not otherwise mentioned .. ..	1	—
Copy and service of rules within 5 miles of the respective Court Houses at the different stations .. ..	1	00
Waiting and sending letters when absolutely necessary ..	—	50
Bills of costs with copies and getting the same taxed with affidavit and all expences and allowances thereon, but not including the Officer's fee in each case .. ..	2	00
Ditto on further taxation after hearing .. ..	—	50
Letters, Messages, &c. not otherwise charged .. ..	1	00

## COURT OF REQUESTS.\*

The following revised table of Fees established for the Court of Commissioners for the Recovery of Small Debts, is published for general information:—

Filing Fee—Ten per cent on the amount of the sum claimed.

Entering Complaint and granting Summons .....	50 Cents
Subpoena .....	20 "
Warrant and Attachment .....	50 "
Postponement and Notice .....	20 "

Five per cent is allowed on the sales of goods and property, disposed of at Public Outcry, by the decrees of the Court of Request, to the Bailiff, whose business it is to attend and sell such Property.

The Fees specified in the above Table are to be levied at the several Courts of Requests in the Straits Settlements from the 1st of Jan. 1860.

By order of the Governor in Council,

J. BURN—Captain,

*Secy. to the Governor of the Straits Settlements.*

Singapore, 10th December 1859.

## POLICE COURT.

The only fees authorised by the Police Act (sec. 24 of the amending Act No. 48 of 1860) are:—

- " For every summons issued by the Commissioner of Police or a Magistrate under the Act ..... 8 annas.
- " For every subpoena so issued ..... 4 annas.
- " \* " Provided that it shall be lawful for such Commissioner or Magistrate in any case to remit such fee or fees, if he shall be satisfied that the party complaining is unable to pay the same, or if the complaint is made by any Police Officer in execution of his duty.

In practice the following unauthorized fees are levied:—

For each Warrant to apprehend whether it contains one or many names .. ..	1 dollar
For each Search Warrant .. ..	1 "
" " Summons not including more than 4 names ..	50 cents
" every person appearing to the Summons ..	25 "
" " Subpoena not including more than 4 names ..	50 "
" " additional Subpoena required by the same party ..	50 "
" " Bail Bond, to be paid by the party bailed ...	50 "
" " Recognizance to keep the Peace or for good behaviour, to be paid by the party required to enter into the same ...	50 "
For every Recognizance for Defendant to appear at Quarter Sessions.. ..	50 "
For every Revenue Warrant .. ..	1 dollar
" " Person arrested under Warrant .. ..	25 cents
" " Commitment, except for Felony, whether containing one or more names .. ..	1 dollar

\* There does not appear to be any legislative authority for the levy of fees in the Court of Requests.

## POLICE FEES.

Poundage Fees for every goat, sheep or hog (Act 48 of 1860 § 28)	..	8 annas
Do. for every other animal (ib.) ..	..	1 Rupee
Annual Registering of every boat that plies for passengers (Act 48 of 1860 § 23)	..	1 "

## LAND OFFICE.

To meet the charges attending the Registry of Deeds of Sales and other Transfers	..	Rs. 4	"	"
For inspecting Office Registers ..	..	"	1	"
For granting Certified Extracts from the Office Registers ..	..	"	2	"
For Registering Probates of Wills and Letters of Administration..	..	"	4	"

## SURVEYOR GENERAL'S OFFICE.

The following sanctioned Scale of Fees to be charged, on account of Government by the Surveyor General's Department, for Surveys, executed at the request of private parties is notified for general information :—

- 1 Lots below 10 Acres and above 50 dollars value..... \$ 5.00.
- 2 For each Acre above 16 to 80 Acres....., 0.50.
- 3 " from 80 to 120 Acres....., 0.40.
- 4 " from 120 to 250 Acres ..... , 0.30.
- 5 For Lots below 50 Dollars value, 10 per Cent on the price of the Land.

The above does not include the travelling expenses which are fixed as follows :—

1. If the work is to be performed by the Native Establishment, the charge per mile from the Surveying Station at which the application for the same has been made will be.....Cents 25.
2. If the attendance of the Superintending Officer is required, per Mile.....70.

It is to be distinctly understood, that the above confers no right upon private parties to demand the services of officers of the Survey Department, and that their applications for the same can only be attended to when, in the opinion of the Head of the Department, compliance with their wishes will not involve any interference with the interest of the Public Service.

By Order,  
J. MONIOT,  
Surveyor General, Straits Settlements.

Singapore, October 6th 1860, }  
Surveyor General's Office. }

## SHIPPING OFFICE.

Rs. As. Pice

<b>1. Engagement or discharge of Crews.</b>				
In ships under 100 Tons .....		3	0	0
From 100 to 200.....		7	0	0
200 „ 300.....		10	0	0
300 „ 400.....		12	8	0
400 „ 500.....		15	0	0
500 „ 600.....		17	8	0
600 „ 700.....		20	0	0
700 „ 800.....		22	8	0
800 „ 900.....		23	0	0
900 „ 1000 .....		27	8	0
above 1000.....		30	0	0

and so on for ships of larger tonnage, adding for every one hundred tons above one thousand two Rupees and 8 annas.

2. Engagement or discharging of seaman separately one Rupee for each Seaman.

## MUNICIPAL RATES, TAXES AND FEES.

*Rates.*

An annual rate to be fixed from time to time by the Governor, not exceeding 10 per cent of the annual value, shall be imposed on all houses and buildings, and not exceeding 5 per cent on all lands, payable by the owners, by half yearly instalments (Act 27 of 1856 sec. 21).

*Taxes.*

A tax shall be imposed upon all carriages, waggons, carts, and all horses, ponies, mules, and elephants kept in each of the said Stations, and shall be payable quarterly in advance by the owners or persons having charge of the same, at the following rates per annum, namely.—

	Rs.
For every four-wheeled carriage on springs .....	24
For every two-wheeled carriage on springs .....	16
For every waggon drawn by man or beast .....	16
For every cart drawn by any description of cattle .....	12
For every cart drawn by man .....	8
For every horse, pony, or mule.....	4
For every elephant .....	20

Provided that the several vehicles and animals hereinafter mentioned shall be exempt from the said tax, namely—

1. Gun carriages, and Ordnance carts and waggons.
2. Horses belonging to Officers doing Regimental duty, and at the rate of one horse for each Officer.
3. Conservancy carts, horses, ponies, and mules belonging to the Commissioners.

4. All vehicles and animals kept for sale, and not used for any other purpose, provided the same be in the hands of *bond fide* dealers in such vehicles or animals.

5. Waggon and carts kept within estates or plantations, and not used upon the public roads, having the name of the owner painted upon some conspicuous part thereof in letters not less than two inches in length, and registered at the Office of the Commissioners.

6. All animals kept within estates or plantations and not used upon the public roads.

7. Ponies under 11 hands, and children's carriages the wheels of which do not exceed 24 inches in diameter.

*Fees for Licenses granted under secs. 19, 62, 93, 89 & 113 of Act 14 of 1856.*

Licence to open a public necessary ..	Yearly Fee	50 cents
" do. new slaughter houses ..	"	5 dollars
" to boil or melt tallow to are a woodyard, brick ..	"	10 "
" kiln, lime-kiln or pottery ..	"	5 "
" to open a new straw or coal yard ..	"	1 "
Erections on roads during Festivals ...	per day	1 "
Using streets for building Materials.		

Frontage 16 feet and under,  $\frac{1}{4}$  a dollar per month per foot, depth allowance according to width of Street.

Above 16 feet one dollar.

*Fees for Registering Carriages &c. under Sec. 26 of Act 27 of 1856.*

Registering every carriage kept and let out for hire, and every waggon and cart kept and used ..... 4 annas.

*Table of fees in distrainments under Act No. 25 of 1856.*

Sum Distrained for		Fee.	
		Rs.	As.
Under 5 Rupees, .....		0	8
5 and under 10 Rupees, .....		1	0
10 " 15 " .....		1	8
15 " 20 " .....		2	0
20 " 25 " .....		2	8
25 " 30 " .....		3	0
30 " 35 " .....		3	8
35 " 40 " .....		4	0
40 " 45 " .....		4	8
45 " 50 " .....		5	0
50 " 60 " .....		6	0
60 " 80 " .....		7	8
80 " 100 " .....		9	0
Above 100 " .....		10	0

The above charge includes all expenses, except when peons are kept in charge of property distrained, in which case four annas must be paid daily for each man.

\*. The rates and taxes are levied under the authority of the Conservancy Act (No. 14 of 1856), General Municipal Act (No. 25 of 1856) and Straits Municipal Act (No. 27 of 1856).

# **EXCISE FEES AND DUTIES.**

*Levied under Act 14 of 1851.*

License and registration of

An Opium house	...	...	3 Sp. drs.
A Tavern	..	..	5 "
Eating House or Spirit Shop	..	..	3 "
Toddy Shop	..	..	2 "

The above to be paid to the Superintendent of Police for the use of the Farmers.

On Licenses for Taverns and places of public entertainment

(Act 48 of 1860 sec. 12)... .. 1 Rupee

*Duties payable to the Excise Farmers.*

On imports of spirituous liquor or arrack for consumption, and on all sales of such liquor or arrack in a less quantity than 160 Imperial gallons, or, if sold in bottles, in less quantity than 50 doz. bottles,—per gallon, or for every 4 quart bottles .. 50 cents

## **FEES PAYABLE TO THE MARINE EXAMINER.**

Certificate for a Master under Act 1. of 1859	..	10 Rupees
Do. Do. Mate	Do. ..	5 ..

## **STRAITS LIGHTS.**

ACT NO. XIII OF 1854.

Section IV. If, after the passing of this Act, any Ship of the burden of fifty tons or upwards, shall depart from, or enter any Port, Harbour or Roadstead, in the possession or under the Government of the East India Company, upon, or during, or at the termination of any voyage, in the ordinary course of which she would pass any of the said Lights, a Toll shall be paid in respect of such Ship, except in the cases hereinafter mentioned, at the rates following, that is to say:—

1.—If the voyage be one in the ordinary course whereof such Ship would pass the whole of the said Lights, at the rate of one anna for every ton of her burden.

2.—If the voyage be one in the ordinary course of which she would pass any one or more of the said Lights, but not all of them, at the rate of half an anna for every ton of her burden. Provided that such Toll shall not be payable at any such Port or Place if such Toll shall have been paid at the same or any other Port or Place under the Government of the East India Company in respect of the same voyage, and a proper voucher for such payment shall be produced, or other satisfactory proof of such payment given.

Section V.—The return of a Ship from any Port or Place shall be deemed a distinct voyage within the meaning of this Act, notwithstanding Toll shall have been paid in respect of her voyage to such Port or Place, and notwithstanding the terms of any Charter Party.

Section XII.—The Collector or other Chief Officer of Customs at any Port, Harbour, or Place in the possession, or under the Government of the East India Company, or any other Officer whom the Government, to which such Port, Harbour or Place is subordinate, may appoint to receive the Tolls above mentioned, shall collect the same by himself, or by any Officer in his Establishment when he shall appoint.

## CHARGES FOR FREIGHT AND PASSAGE ON THE GOVERNMENT STEAMER.

The following scale of charges for hire of cabins, berths and freight per H. M. Strait's Steamer "*Hooghly*," is published for general information:—

Application to be made to the Master Attendant who will allot the Cabins under orders from the Resident Councillor after due provision has been made for Government Passengers.

### MALACCA.

Cabin..	..	..	\$ 4.
Berth..	..	..	" 2.
Native Deck Passenger	..	..	" 2.

### PINANG.

Cabin..	..	..	\$12.
Berth..	..	..	" 6.
Native Deck Passenger	..	..	" 5.

Not to include table allowance, which is payable to the Commander of the vessel at the Government rates.

### FREIGHT TO MALACCA.

Per ton	..	..	\$3.50
Treasure $\frac{1}{4}$ per cent	..	..	
Opium per chest	..	..	" 1.50

### FREIGHT TO PINANG.

Per ton	..	..	\$ 7 @ \$ 8.
Treasure $\frac{1}{4}$ per cent.	..	..	
Opium per chest	..	..	\$ 3.

By Order,

Singapore, 7th June 1860. J. D. VAUGHAN,—Master Attendant.

## RENT OF GOVERNMENT BUNGALOWS.

RULES regarding the occupation of Government Bungalows, exclusive of the Convalescent Bungalow at Pinang, throughout the Straits Settlement.

1.—Parties, whether Government Servants or otherwise, renting the Bungalows to pay at the following rate:—

For 1 day	..	\$ 1	For 16 days	..	\$ 11.50
" 2	"	" 2	" 17	"	" 12
" 3	"	" 3	" 18	"	" 12.50
" 4	"	" 4	" 19	"	" 13
" 5	"	" 5	" 20	"	" 13.50
" 6	"	" 6	" 21	"	" 14
" 7	"	" 7	" 22	"	" 14.50
" 8	"	" 7.50	" 23	"	" 15
" 9	"	" 8	" 24	"	" 15.50
" 10	"	" 8.50	" 25	"	" 16
" 11	"	" 9	" 26	"	" 16.50
" 12	"	" 9.50	" 27	"	" 17
" 13	"	" 10	" 28	"	" 17.50
" 14	"	" 10.50	" 29	"	" 18
" 15	"	" 11	" 30	"	" 18.50



2.—Parties renting a Bungalow will on entry receive from the man in charge the whole of the furniture, crockery, glass, &c., and be held responsible for these during occupancy, all breakages, or injury to be made good.

3.—Servants are prohibited from depositing dirt and filth in the proximity of a Bungalow.

4.—Any person or persons renting a Bungalow and failing to act up to Rules 2 and 3, will not again be permitted to occupy the premises.

5.—Any person or persons renting a Bungalow must vacate the same at the expiration of 15 days, in the event of the accommodation being applied for by other parties.

6.—A visitor's book will be kept at each Bungalow in which persons occupying the building are requested to insert their names.

By Order,

J. BURN,—Captain,

Singapore, 6th September, 1860.

Secretary to the Governor.

### ECCLESIASTICAL FEES.

For Marriage by Banns	..	..	\$ 3 or 6 Rs.
Do. " License	..	..	\$ 5 " 10 "
Burial Service	..	..	\$ 3 " 6 "
Entering in the register any Baptism	..	..	\$ 1 " 2 "
Making any extract from the register	..	..	\$ 1 " 2 "

The above fees are chargeable only to persons not Military.

No charge for Burial Service for Seamen under the rank of Mate.

### MEDICAL.

Home Department.

No. 2324.

The 18th October 1858.

The following Despatch, from the Hon'ble the Court of Directors, is published for general information:

### PUBLIC DEPARTMENT.

No. 129 of 1858.

#### OUR GOVERNOR-GENERAL OF INDIA IN COUNCIL.

Para. 1.—The papers noted in the margin bring to our notice certain cases in which Civil Medical Officers in the various Presidencies have demanded excessive remuneration for their attendance on the Families of Civil Servants of Government, and of Military Officers in Civil employment; and apprise us of the measures adopted by you in consequence. The Notification of the 29th September 1857; lays down the principles on which your decisions in these various cases have been based. These are, first, that the rule under which Civil Medical Officers are unquestionably entitled to remuneration for attendance on the Families of Officers in

(Whole) Bombay Public Letter, dated 2nd December (No. 102) 1856.

Extract paragraphs 82 to 88 and 89 to 93, India Public Letter of 11th March 1857, No. 19.

Paragraphs 87 to 93, Madras Public Letter of 26th August 1857, No. 18.

(Whole) India Public Letter, dated 12th November 1857.

No. 131. Extract para-

graph 39 and 40, Madras Public Letter, dated 2nd February (No. 7), 1858.

Civil employment is a just one and should be maintained; secondly, that Government should not interfere by the issue of any general regulation with the amount of such remuneration, but should not fail to mark by severe censure, or in extreme cases, by removal from Civil employment, their disapproval of extortionate demands on the part of the Medical Officer.

We are, &c.

F. CURRIE,

B. J. EASTWICK,

*And other Directors.*

LONDON, }  
18th August. }

## GOVERNMENT NOTIFICATION REGARDING THE COMMUTATION OF QUIT RENT AND SALE OF WASTE LANDS.

With reference to the Resolution of the Hon'ble the President in Council dated the 26th April 1843, and the instructions received from the Right Hon'ble the Governor General of India in Council under date the 30th October 1844, the following notice regarding the Commutation of Quit Rent, and Sale of Waste Lands at Prince of Wales' Islands, Province Wellesley, and Singapore is published for general information.

### PRINCE OF WALES' ISLAND, AND PROVINCE WELLESLEY.

1.—Every person holding Land on Grant subject to an Annual Quit Rent, exceeding one Dollar per Acre, shall have the option of commuting the same by the payment of an aggregate of from 5 to 8 years purchase at the discretion of the Chief Local Authority, and any persons paying less than One Dollar, on such conditions as that officer may determine.

2.—Holders of Leases on which the Rent reserved exceeds One Dollar shall have the option of receiving a Deed of Sale in perpetuity in lieu of their Leases on payment of an aggregate of from 5 to 8 years purchase at the discretion of the Chief Local Authority; and all persons paying less than a Dollar on Lease or Cutting Paper on such conditions as that officer may determine.

3.—All unoccupied and Waste Lands, the Property of Government required for Agricultural purposes shall be disposed of by Private or Public Sale in full property at from 5 to 10 Rs. and upwards per Acre according to the nature of the Soil and other circumstances.

### SINGAPORE.

1.—All Persons holding Lands under Regulation 1 of 1830, designated *Periodical Leases*, save and except Leases No. 29, 30 and 113, shall have the option of commuting their future Rents by obtaining a Deed of Sale in perpetuity on payment of an aggregate of 8 years purchase calculated at Rs. 2. 50 per Acre per Annum, and the Holders of the

Leases No. 29, 30 and 113, in the like manner at 5 Dollars per Acre per Annum.

The Holders of Leases at Buffalo Village and also of Leases No. 404, 405, 500, 507, and 616 shall also have the privilege of commuting their future Rents by a payment equivalent to 8 years purchase.

2.—All unoccupied and Waste Lands the property of Government required for Agricultural purposes shall be disposed of by Private or Public Sale in full Property at from 5 to 10 Rs. and upwards per Acre according to nature of Soil, locality and other circumstances.

3.—All unlicensed Squatters or Occupier of Land who have no title to the Ground, beyond that which their Labour in reclaiming the Ground from a Primitive Forest may have given them, will be allowed a Deed of Sale in perpetuity on the terms stated in Para<sup>2</sup>.

4.—Such Squatters or Occupiers of the Government Lands who may refuse to accede to the above terms will be dealt with under the provision of Act XVI of 1839.

1.—The whole of the Deeds of Sale in Perpetuity hereafter to be issued at Prince of Wales' Island, Province Wellesley and Singapore provision for the resumption of Land, if one fourth be not cleared and cultivated within five years, will be inserted. A form of the said Deed may be seen on application at the Land Office where the general direction of the Roads which Government may contemplate opening, and every requisite information as to the disposal of Public Lands will be readily communicated.

2.—Prior to issuing Deeds of Sale, portions of Land will be marked off, and reserved for the supply of Timber, Earth, Stone and other materials for Roads, Drains, Bridges, and other Public Works.

A line of 60 feet inwards from High water mark will also be reserved along the Coast of the Island of Singapore.

3.—Parties in possession of Lands which have been surveyed will be furnished with Deeds of Sale at an early date on the payment of the price determined on by the Resident Councillor and Collector, subject to an appeal to the Governor of the Straits Settlements, should the rate per Acre be considered unreasonable and excessive by the Occupiers of the Land.

4.—Such of the Lessees or Holders of Grants above referred to at Prince of Wales' Island, Province Wellesley and Singapore, as may not consent to the terms fixed will be permitted to abide by their existing engagements.

(Signed) W. J. BUTTERWORTH,  
Governor of P. W. Island,  
Singapore and Malacca.

Singapore, 20th Decr. 1844.

## LAND OFFICE CONVEYANCING CHARGES.

### GOVERNMENT ADVERTISEMENT.

Notice is hereby given that from the 1st day of January 1843 the following Fees, are authorized to be charged to all persons desirous of having Bills of sale, and mutation paper drawn out at the Land Office in lieu of those hitherto levied:—

For Bill of sale, including Registration for each transfer, under the sum of 50 dollars .. ..	\$ 1 78
Do. do. above 50 Drs. and under 100 .. ..	" 3 "
Do. do. above 100 Drs. and under 500 .. ..	" 4 "
Do. do. above 500 Drs. and under 1,000 .. ..	" 6 "
Do. do. above 1,000 .. ..	" 8 "
The above Scale includes the Registry Fee of 4 Company's Re-authorized under Act 16 of 1839.	

### TOLLS AT PUBLIC FERRIES.

*The following Tolls and Rules for the management of the Public Ferries in the Station of Prince of Wales' Island, have received the sanction of His Honor the Governor.*

#### TABLE.

The Toll-Keeper at each Ferry is authorised to demand Tolls at the following rates:—

	Cts.
For each 4 wheeled conveyance with draft Animals, .....	15.
" Do. 2 Do. with Do. ....	10.
" Do. Horse, Pony, Donkey Buffalo or other Horned Cattle, ..	05.
" Do. Goat, Sheep, Pig, Calf, ....	02.
" Do. Coolie load, .....	01.
" Timber 2 feet in length and under by 6 inches, .....	01.
" Do. above the size, .....	02.
" each foot passenger, ....	01.

#### RULES.

1. Every Toll-Keeper who shall neglect to hang up and keep in good order and repair these Rules on the above Table of fares, or who shall willfully, remove, alter, or deface the same, or allow the same to become illegible, shall be liable to a penalty not exceeding ten Rupees.

2. Any person who shall pass through the Toll-bar at any Ferry for the purpose of going across to the opposite bank of the river, without paying the toll authorised to be demanded, shall be liable to a penalty not exceeding twenty Rupees.

3. The Toll-Keeper, or person in charge, shall have his boat or boats numbered and Registered in the Office for the Registry of Licensed boats.

4. Every Toll-Keeper, Tindal or other person in charge of any Public Ferry, shall always be in attendance at the Ferry, or provide some competent person to act for them.

5. Every Toll-Keeper, Tindal or other person in charge of any Ferry shall provide such number of boats, and of such dimensions for the conveyance of passengers as the Municipal Commissioners shall deem fit, and such boats shall be kept in such condition and be furnished with such fittings as they or Officers appointed by them shall consider necessary.

6. No Ferry boat shall very carry more than 8 passengers at one trip, nor shall more than 2 ponies or 4 horned Cattle be carried in any boat at one trip.

7. Any person who shall convey for hire or for any consideration whatsoever, any persons, beasts or goods across any river on which any Public Ferry is established to the opposite side, within three miles of any such Ferry, shall be liable to a penalty not exceeding 20 Rupees.

8. Any Tindal, person in charge of any Ferry, or servant of such person found drunk or disorderly whilst attending to the business of the Ferry, shall be deemed to have infringed these Rules.

### FEEES LEVIED BY THE REGISTRAR OF SHIPPING.

For	Registering a new vessel or the whole interest of a vessel, one anna per ton.			
"	do.	Mortgages .. ..	..	1 Rupee
"	do.	Declaration of ownership .. ..	..	1 "
"	do.	Inspecting or taking notes .. ..	..	1 "

### RATES OF COMMISSION AT PINANG

*Adopted at a General Meeting of the Pinang Chamber of Commerce on the 3rd November 1855.*

1—On all sales or purchases except as otherwise provided for .. ..	5	per cent
2—On purchase of Goods or Produce for returns .. ..	2½	"
3—On sale or purchase of Opium .. ..	3	"
4—On sale or purchase of Ships, Vessels, Houses or Lands .. ..	5	"
5—On sale, purchase or shipment of Bullion .. ..	1	"
6—On sale or purchase of Diamonds, Jewels, &c. .. ..	2	"
7—On returns in Treasure, Bullion or Bills .. ..	1	"
8—On all Goods consigned and withdrawn—half Commission.		
9—On sale, purchase or negotiating of Bills not serving for purchase of Goods or Produce .. ..	1	"
10—On all Goods sold by auction in addition to the above .. ..	2½	"
11—On <i>del credere</i> , or guaranteeing sales .. ..	2½	"
12—Shroffage, 1 per mille.		
13—On all advances of money for the purpose of trade, whether the Goods are consigned to the Agent or not, and where a Commission of 5 per cent is not charged .. ..	2½	"
14—On ordering Goods, or superintending the fulfilment of Contracts whence no other Commission is derived .. ..	2½	"
15—On guaranteeing Bills, Bonds, or other engagements, and on becoming Security for the Administration of Estates or to Government or Individuals for Contracts, Agreements, &c. .. ..	2½	"

16—On acting for the Estates of persons deceased as Executors or Administrators .. ..	5	per cent
17—On the management of Estates for others, on the amount received .. ..	5	"
18—On procuring freight, or advertising as the Agents of Owners or Commanders,—on the amount of freight, whether the same passes through the hands of the Agent or not .. ..	5	"
19—On chartering ships for other parties .. ..	2½	"
20—On effecting Insurance, or writing orders for do. .. ..	½	"
21—On settling Insurance losses, total or partial, and on procuring return of premium .. ..	2½	"
22—On debts when a process at law or arbitration is necessary 2½ per cent on the amount claimed, and if recovered by such means .. ..	5	"
23—On Bills of Exchange noted or protested ... ..	1	"
24—On collecting house-rent .. ..	5	"
25—On ship's disbursements .. ..	5	"
26—Do. when in funds .. ..	2½	"
27—On negotiating Loans on Respondentia .. ..	2	"
28—On letters of credit granted for Mercantile purposes .. ..	2½	"
29—On purchasing or selling Government securities, or on exchanging or transferring the same .. ..	½	"
30—On delivering up do. .. ..	½	"
31—On all advances not punctually liquidated, the Agent to have the option of charging a second Commission, as upon a fresh advance, provided the charge be only made once in the same year		
32—On transhipping all Goods or Produce ... ..	1	"
33—Do. Treasure .. ..	½	"
34—At the option of the Agent, on the amount debited or credited within the year, including interest, and excepting only such items on which at least 2½ per cent has been charged .. ..	1	"
(This charge not to apply to paying over a balance due on an account made up to a particular period, unless where such balance is withdrawn without reasonable notice).		
35—On collecting Freight .. ..	2½	"
36—On Freight of vessels consigned to an Agent in Pinang <i>inwards</i> (the freight having been paid at the port of loading) when the vessel is loaded <i>outwards</i> by another Agent, or proceeds elsewhere for a cargo, in absence of any special agreement .. ..	2½	"
37—On advances made to account of Contracts for produce, the usual guarantee Commission and Interest to be charged.		
38—In purchasing produce, the Commission to be charged on the Invoice, including charges.		

JOHN BUTTERY,-- *Secretary.*

# RATES OF PREMIA OF INSURANCE.

*Agreed to by the Agents in Pinang of the undermentioned*

*Insurance Offices.*

ON GOODS BY SAILING VESSELS.

	F. P. A.	Average.
<b>To Europe and America.</b>		
On Sugar, Cutch, and Saltpetre .....	2	3½
On Rice, Hides, and Gambier .....	2	3½
On other Articles .....	2	2½
„ Mauritius, Cape of Good Hope, and St. Helena .....	1½	2
„ Hongkong, Macao, and Whampoa.		
Sailing between 28th February and 1st July...	1½	1½
ditto 30th June „ 1st March	1½	2
„ Amoy		
Sailing between 28th February and 1st July..	1½	2
ditto 30th June „ 1st March	2½	2½
„ Foo Chowfoo, Ningpo, and Shanghai.		
Sailing between 28th February and 1st July	2	2½
ditto 30th June „ 1st March	2½	3
„ Batavia.		
Sailing between 31st October and 1st April .....	..	1½
ditto 28th March „ 1st November.....	..	1½
„ Bombay.		
Sailing between 31st October and 1st March .....	1½	1½
ditto 28th February „ 1st November .....	1½	1½
„ Ceylon .....	..	1½
„ Pedier Coast .....	..	1½
„ Calcutta .....	..	1½
„ Madras .....	..	1½
„ Singapore .....	..	2
<b>From</b>		
<b>or to</b> { Arracan, Maulmain, and Rangoon		
Sailing between 31st October and 1st March.....	..	1
ditto 28th February „ 1st November .....	..	1½
<b>To West Coast of Sumatra and back to Pinang (if Voyage exceeds 3 months an additional 1 per cent per month)</b>	..	2½

On Treasure a deduction of *one-fifth* of the above rates will be made

For each additional port on any one Voyage, at which Vessels may touch to load or discharge Cargo, an additional *one quarter*.

## ON GOODS BY STEAMERS.

	Treasure.	Goods.
To Singapore .....	$\frac{1}{4}$	$\frac{1}{4}$
„ Batavia .....	$\frac{1}{4}$	$1\frac{1}{4}$
„ Hongkong.....	$\frac{1}{4}$	$1\frac{1}{4}$
„ Canton .....	1	$1\frac{1}{4}$
„ Shanghai .....	$1\frac{1}{4}$	$2\frac{1}{4}$
„ Galle .....	$\frac{1}{4}$	$\frac{1}{4}$
„ Bombay and Madras, via Galle .....	$\frac{1}{4}$	$1\frac{1}{4}$
„ Southampton.....	$1\frac{1}{4}$	$1\frac{1}{4}$
„ Calcutta.....	$\frac{1}{4}$	1

On Insurances effected against *Total loss only*, a deduction of *one fifth*.

On Insurances effected *free of particular average*, when the rate is not stated, a deduction of *one eighth*.

Average payable on Opium and Silk, on each Chest—all other Goods, \$ 500 value.

Feathers, Beche de Mer, Dry Fish, and Birds Nests, Free of particular average.

Wm. HALL & CO.

*Agents East India Marine Insurance Company*

FRASER & CO.

*Agents Eastern Marine Insurance Company.*

BROWN & CO.

*Agents London & Oriental Steam Transit Insurance Office.*

C. M. SHIRCORE & CO.

*Agents Calcutta Mercantile Marine Insurance Society and Sun Insurance Office.*

A. A. ANTHONY.

*Agents Reliance Marine Insurance Office.*

J. A. ANTHONY.

*Agents Amicable Insurance Office.*

PINANG,

15th September 1856.

### RATES OF POSTAGE

to be collected upon Letters forwarded through the United Kingdom, addressed to the under-mentioned Colonies and Foreign Countries:—



*Upon Letters for those places marked\* pre-payment is compulsory.*

**NOTE.**—The French transit rate of two annas per quarter ounce must be collected, in addition, upon all Letters sent to the United Kingdom *via* Marseilles.

COUNTRIES, &c.	Upon a Letter not exceeding ½ an oz. conveyed from India to the United Kingdom by Packet <i>via</i> S.			COUNTRIES, &c.	Upon a Letter not exceeding ½ an oz. conveyed from India to the United Kingdom by Packet <i>via</i> S.			COUNTRIES, &c.	Upon a Letter not exceeding ½ an oz. conveyed from India to the United Kingdom by Packet <i>via</i> S.		
	R.	A.	P.		R.	A.	P.		R.	A.	P.
*Africa, West Coast of ...	0	7	6	Hanover ...	0	9	6	Russia ...	0	12	0
*Ascension ...	0	7	6	*Hayti ...	0	7	6	St. Helena ...	0	7	6
Austria ...	0	9	6	Hesse... ..	0	9	6	*Sandwich Islands ...	0	13	0
Belgium ...	0	6	0	Holland ...	0	6	0	Saxe Altenburg ...	0	9	6
Belize, Honduras ...	0	7	6	Homburg, Hesse ...	0	9	6	Saxe Coburg Gotha ...	0	9	6
Bermuda ...	0	7	6	Larnaca ...	0	13	0	Saxe Meiningen ...	0	9	6
*Bolivia ...	1	3	6	Lauenburg..	0	11	0	Saxe Weimar ...	0	9	6
*Brazil ...	0	11	6	Lippe Detmold ...	0	9	6	Saxony ...	0	9	6
Bremen ...	0	9	6	Lubeck ...	0	7	6	Schaumburg Lippe ...	0	9	6
Brunswick..	0	9	6	*Martinique..	0	9	6	Schwartzburg Rudoldstadt	0	9	6
*Buenos Ayres ...	0	11	6	Mecklenburg	1	5	0	Schwartzburg Sonderhaken ..	0	9	6
*California ...	0	13	0	*Mexico ...	0	11	6	Seres ..	0	9	6
Cape of Good Hope ...	0	7	6	*Monte Video	0	9	6	*Surinam ..	0	7	6
Canada ...	0	9	0	Nassau (Germany) ...	0	7	6	Sween ..	0	13	6
*Canary Islands ...	0	7	6	*Natal ...	0	11	6	Tchesme ..	0	13	0
*Chili ...	1	3	6	*New Granada	0	15	0	Tenedos ..	0	13	0
*Costa Rica... ..	1	5	0	da	0	7	6	*Turkey (Europe except the place Specified ..	0	9	6
*Cuba ...	0	15	6	*Norway ..	0	7	6	United States	0	9	6
*Curacao ...	0	7	6	New Brunswick	7			*Venezuela	0	11	6
Denmark ...	0	11	0	wick	0	7	6	West Indies (British)..	0	7	6
*Ecuador ...	1	3	6	Newfoundland ..	0	7	6	West Indies (Danish)..	0	7	6
*Falkland Islands ...	0	7	6	Nova Scotia	0	9	6				
Frankfort... ..	0	9	6	Oldenburg	0	13	0				
Gold Coast..	0	7	6	*Oregon ..	1	3	6				
*Grey Town..	0	7	6	Peru ...	0	12	0				
*Guadeloupe..	0	7	6	Poland ..	0	14	0				
*Guatemala..	0	7	6	*Puerto Rico	0	7	6				
Hamburgh ...	0	9	6	Prince Edward Island							
				Prussia ...	0	9	6				
				Reuss.. ..	0	9	6				

The following Conditions are to be observed in sending Book-Packets by Post:—

*1st.*—The Postage must be pre-paid in full, by means of Postage Stamps affixed outside the Packet on its cover.

*2nd.*—Every Packet must be sent either without a cover, or in a cover open at the ends or side, so as to admit of the enclosures being removed for examination.

*3rd.*—The Packet may contain any number of separate books or other publications, prints or maps, and any quantity of paper, parchment or vellum (to the exclusion, however, of letters whether sealed or open) and the books or other publications, prints, maps, &c., may be either printed, written or plain, or any mixture of the three. Further, all legitimate binding, mounting, or covering of a book, publication, &c., or of a portion thereof, will be allowed, whether such binding, &c., be loose or attached; as also rollers in the case of prints or maps, markers (whether of paper or otherwise,) in the case of books; and in short whatever is necessary for the safe transmission of literary or artistic matter or usually appertains thereto.

*4th.*—The Packet must not contain any letter, closed or open, or any enclosure, sealed or otherwise closed against inspection, nor must there be any letter, or any communication of the nature of a letter, written or printed in any such Packet or on its cover. Entries, however, merely stating who sends the book, &c., or to whom it is given, are not regarded as a letter.

*5th.*—No Book-Packet can be received if it exceeds two feet in length, width, or depth.

*6th.*—Any Packet which shall not be open at the ends or sides, or shall have any letter or any communication of the nature of a letter written or printed in it or upon its cover will be charged with Letter Postage.

*7th.*—If a Packet be found to contain any letter, whether closed or open, or enclosure sealed or otherwise closed against inspection, or any other unauthorized enclosure, the letter or enclosure will be taken out and forwarded to the address on the Packet, charged with full Postage as an unpaid letter together with an additional Book-rate; that is, with the Postage chargeable on a Book weighing not more than half a lb, the remainder of the Packet, if duly pre-paid with Stamps, will then be forwarded to its address.

*8th.*—If a Packet be not sufficiently pre-paid with Stamps but nevertheless bear Stamps equal to a single Book-rate, it will be forwarded charged with the deficient Book-Postage together with an additional Book-rate; but any Packet which shall not bear Postage Stamps equal to a single Book-rate will be detained and charged with the Letter Postage.

*9th.*—No Book-Packet weighing more than three lbs can be sent to or from the East Indies or to New South Wales.

*10th.*—The Colonial Book-Post extends to those Colonies only which are so marked in the Table of Colonial and Foreign Postage.

*11th.*—In no case can a Book-Packet be sent to the Colonies (except at the letter rate of Postage,) through a Foreign Country.

Notice is hereby given that, under the Rules and Conditions applicable to all Packets sent by Book Post, Book Packets addressed to the undermentioned British Colonies will in future be received at all Indian Post Offices, for despatch to their destination through the United Kingdom. The following rates of Postage must be paid in advance by means of Stamps attached to the cover of the Book Packet:—

Not exceeding 4 oz.	Above 4 oz. and not exceeding 8 oz.	Above 8 oz. and not exceeding 1 lb.	Above 1 lb. and not exceeding 1½ lb.	Above 1½ lb. and not exceeding 2 lbs.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
0 4 8	0 9 4	1 2 8	1 12 0	2 5 4

*List of British Colonies to which Book Packets can be sent from India  
via Great Britain.*

Canada,	(But only to Cape Town, Messel
Nova Scotia,	Bay, and Port Elizabeth),
New Brunswick,	Natal,
Prince Edward Island,	Falkland Islands,
Newfoundland,	Gambia,
Bermuda,	Sierra Leone,
British West Indies,	The Gold Coast,
Ascension,	Van Couver's Island,
St. Helena,	Heligoland; and
The Cape of Good Hope,	The Ionian Islands.
CAMP SIMLA, }	
The 10th June 1860. }	

No. 2.

The Public are informed that Book Post Packets can be sent from India to *Great Britain via Marseilles*, according to the following Schedule. The Postage must however be prepaid by Stamps, and the conditions which now exist with regard to the Book Postage, *via Southampton*, are also applicable to the route *via Marseilles*.

*Rate of Postage.*

		<i>Via South-</i> <i>ampton.</i>			<i>Via Mar-</i> <i>seilles.</i>		
		<i>Rs.</i>	<i>As.</i>	<i>P.</i>	<i>Rs.</i>	<i>As.</i>	<i>P.</i>
For a Packet not exceeding 4 oz. in weight ..		0	3	0	0	4	0
Exceeding 4 oz. and not exceeding 8 oz. ..		0	5	6	0	8	0
" 8 oz. and not exceeding 1 lb. ..		0	11	0	1	0	0
" 1 lb. " 1½ lb. ..	1½ lb.	1	0	0	1	8	0
" 1½ lb. " 2 lbs. ..	2 lbs.	1	5	6	2	0	0
" 2 lbs. " 2½ lbs. ..	2½ lbs.	1	11	0	2	8	0
" 2½ lbs. " 3 lbs. ..	3 lbs.	2	0	0	3	0	0

Calcutta,  
The 1st May 1860. }

**EXTRACT FROM THE POST MASTER GENERAL'S LETTER.**

Commencing, therefore, as regards the outward Mails, with the present Mail via Marseilles, the postage on a letter between the United Kingdom and Pinang will be as follows:—

*For a letter, via Southampton.*

Not exceeding ¼ Oz.	Above ¼ Oz. and not exceed- ing 1 Oz.	Above 1 Oz. and not exceed- ing 2 Oz.	Above 2 Oz. and not exceed- ing 3 Oz.
<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>
1. 0.	2. 0.	4. 0.	6. 0.

*For a letter, via Marseilles.*

Not exceeding ¼ Oz.	Above ¼ Oz. and not exceed- ing ¼ Oz.	Above ¼ Oz. and not exceed- ing ¼ Oz.	Above ¼ Oz. and not exceed- ing 1 Oz.
<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>
1. 3.	1. 6.	2. 9.	3. 0.

A fine of *one shilling* instead of 6d., will be chargeable hereafter, in addition to the postage due, upon all *unpaid* or *unsufficiently paid* letters between the United Kingdom and Pinang.

G. F. GOTTLIEB,—*Post Master.*

The Postage to and from Australia, and New Zealand, is also doubled.

Pinang Post Office,  
16th September 1861. }

G. F. G.

**RATES BY THE PENINSULAR AND ORIENTAL STEAM  
NAVIGATION COMPANY'S STEAMERS.**

**RATES OF PASSAGE MONEY.**

Exclusive of the amount payable to the Egyptian Transit Administration, for conveyance of Passengers through Egypt, viz :—  
 For First Class Passengers .. .. £ 7 0 0  
 " Second ditto .. .. " 3 10 0  
 " Children above 3 and under 10 years, half fare.

FROM ENGLAND TO	ADEN.	BOMBAY.	CEYLON.	MADRAS.	CALCUTTA.	PINANG.	SINGAPORE.	HONGKONG.	SHANGHAI.	MAURITIUS.	KG. GEO'S SAND. MELBOURNE, AND SYDNEY.
GENTLEMEN OR LADIES TRAVELLING for one Berth in a General Cabin.....	£ 70	£ 100	£ 100	£ 105	£ 110	£ 110	£ 115	£ 130	£ 150	£ 100	£ 150.
MARRIED COUPLES, occupying a Reserved Cabin	200	250	250	260	260	260	300	330	370	250	370
CHILDREN WITH THE PARENTS—3 years and under	35	50	50	53	55	55	58	65	75	50	75
10.....											
ONE CHILD under 3 years (no Berth provided).....	Free.	Free.	Free.	Free.	Free.	Free.	Free.	Free.	Free.	Free.	Free.
(Should more than one Child under 3 years be conveyed, one quarter of first-class rates will be charged for each Child, exclusive of the one taken free)											
SERVANTS.—Eupn. } In Fore " Natier... } Cabin....	{ 35 { 18	{ 50 { 25	{ 50 { 25	{ 53 { 27	{ 55 { 28	{ 58 { 28	{ 58 { 29	{ 65 { 33	{ 75 { 38	{ 50 { 25	{ 75 { —

The rate of Passage Money from Marseilles is £ 5 less than the rate from England in the case of each Adult First Class Passenger.

## PARCEL RATES.

MEASUREMENT.	Aden, Mauritius, Reunion, Bombay, Ceylon, Madras, Calcutta, Straits, Hongkong, and Australia.	Amoy, Foo Chow-Foo and Shanghai.	MEASUREMENT.	Aden, Mauritius, Reunion, Bombay, Ceylon, Madras, Calcutta, Straits, Hongkong, and Australia.	Amoy, Foo Chow-Foo and Shanghai.
3 inches.	£. s. d. 0 11 0	£. s. d. 0 14 0	8 inches.	£. s. d. 0 16 0	£. s. d. 0 19 0
4 "	0 12 0	0 15 0	9 "	0 17 0	1 0 0
5 "	0 13 0	0 16 0	10 "	0 18 0	1 1 0
6 "	0 14 0	0 17 0	11 "	0 10 0	1 2 0
7 "	0 15 0	0 18 0	12 "	1 0 0	1 5 0

Packages in excess of the above measurement will be charged at the rate of 16s. per foot to Suez; 20s. per foot to Aden, Mauritius, Reunion, India, Straits, Hong Kong, and Australia; and 23s. per foot to Amoy, Foo-Chow-Foo, and Shanghai.

A further charge (when the Company take risks upon themselves,) will be made on each Parcel under the value of £ 20, at the rate of 40s. per cent.; exceeding that value at the following rates:—Suez, Aden, Mauritius, Reunion, Bombay, Ceylon, Madras, Calcutta, Penang, and Singapore, 30s. per cent.; Hong Kong, 35s. per cent.; Australia, Amoy, Foo-Chow-Foo, and Shanghai, 45s. per cent.

If Packages weigh more than 20 lbs. to the cubic foot, the additional weight will be charged 6d. per lb.

*Parcels will not be received after 2 o'clock on Saturdays.*

## MERCHANDIZE.

A form of declaration must be obtained at the Company's Offices in Leadenhall-street, where it will have to be deposited when properly filled up. These Goods are taken by Special Agreement, and must be delivered to the Company at the NINE ELMS STATION, before 5 o'clock, for clear days prior to the departure of each Steamer.

Packages exceeding one cubic foot must be in wooden cases, iron-hooped at each end, or they will not be received.

The weight of each package must not exceed 100 lb.

The Port of Delivery must be distinctly marked on every package.

## SPECIE.

*The following are the Company's lower Rates of Freight, at which Shippers take risks upon themselves.*

Aden, Mauritius, India, and Australia .....	2 per cent.
Straits and Hong Kong .....	2½ "
Shanghai, Foo-Chow-Foo, and Amoy .....	2½ "

*The higher Rates of Freight, which include all insurable risks, may be ascertained on application at the Company's Office.*

Boxes should be strongly made, with elm ends, lined with tin, and must be sealed over tape in counter-sunk hole.

(Hoe's "Safety Bullion Box" is recommended, and can be procured at No. 44. Leadenhall Street.)

Orders have been received from the Post Master General of the United Kingdom, to double the Postage between this and England; the following charges will be made until further orders.

Weight Oz.	United Kingdom Viâ Southampton			United Kingdom Viâ Marseilles			America Viâ Southampton			America Viâ Marseilles		
	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.
1	...	8	..	..	10	..	...	13	6	...	13	6
1 1/4	...	8	..	..	12	...	...	13	6	...	15	6
1 1/2	1	..	..	1	6	..	1	11	..	2	1	..
1 3/4	1	..	...	1	8	..	1	11	..	2	3	..
2	2	..	...	2	10	..	3	6	..	4	..	...
2 1/4	2	..	...	2	12	..	3	6	..	4	2	..
2 1/2	2	..	..	2	14	..	3	6	..	4	4	...
2 3/4	2	..	..	3	...	..	3	6	..	4	6	..
3	3	..	...	4	2	..	5	1	..	6	3	..
3 1/4	3	..	...	4	4	...	5	1	..	6	5	..
3 1/2	3	..	..	4	6	..	5	1	..	6	7	...
3 3/4	3	..	..	4	8	..	5	1	..	6	9	..
4	4	..	...	5	10	...	6	12	..	8	6	..
4 1/4	4	..	..	5	12	..	6	12	..	8	8	..
4 1/2	4	..	..	5	14	..	6	12	..	8	10	..
4 3/4	4	...	..	6	..	..	6	12	..	8	12	..
5	5	...	..	7	2	..	8	7	...	10	9	..
5 1/4	5	...	..	7	4	..	8	7	..	10	11	..
5 1/2	5	...	..	7	6	..	8	7	...	10	13	..
5 3/4	5	...	..	7	8	..	8	7	..	10	15	..
6	6	..	..	8	10	..	10	2	..	12	12	..
6 1/4	6	..	...	8	12	..	10	2	..	12	14	...
6 1/2	6	..	...	8	14	..	10	2	..	13	..	...
6 3/4	6	..	..	9	..	..	10	2	..	13	2	..

To Australia, the same as to England Viâ Southampton.

G. F. GOTTLIEB,

*Post Master.*

Pinang Post Office, }  
13th September 1861. }